APRIL 25, 1942

Railway Age

Founded in 1856

GM DIESEL ROAD POWER *for the* L&N

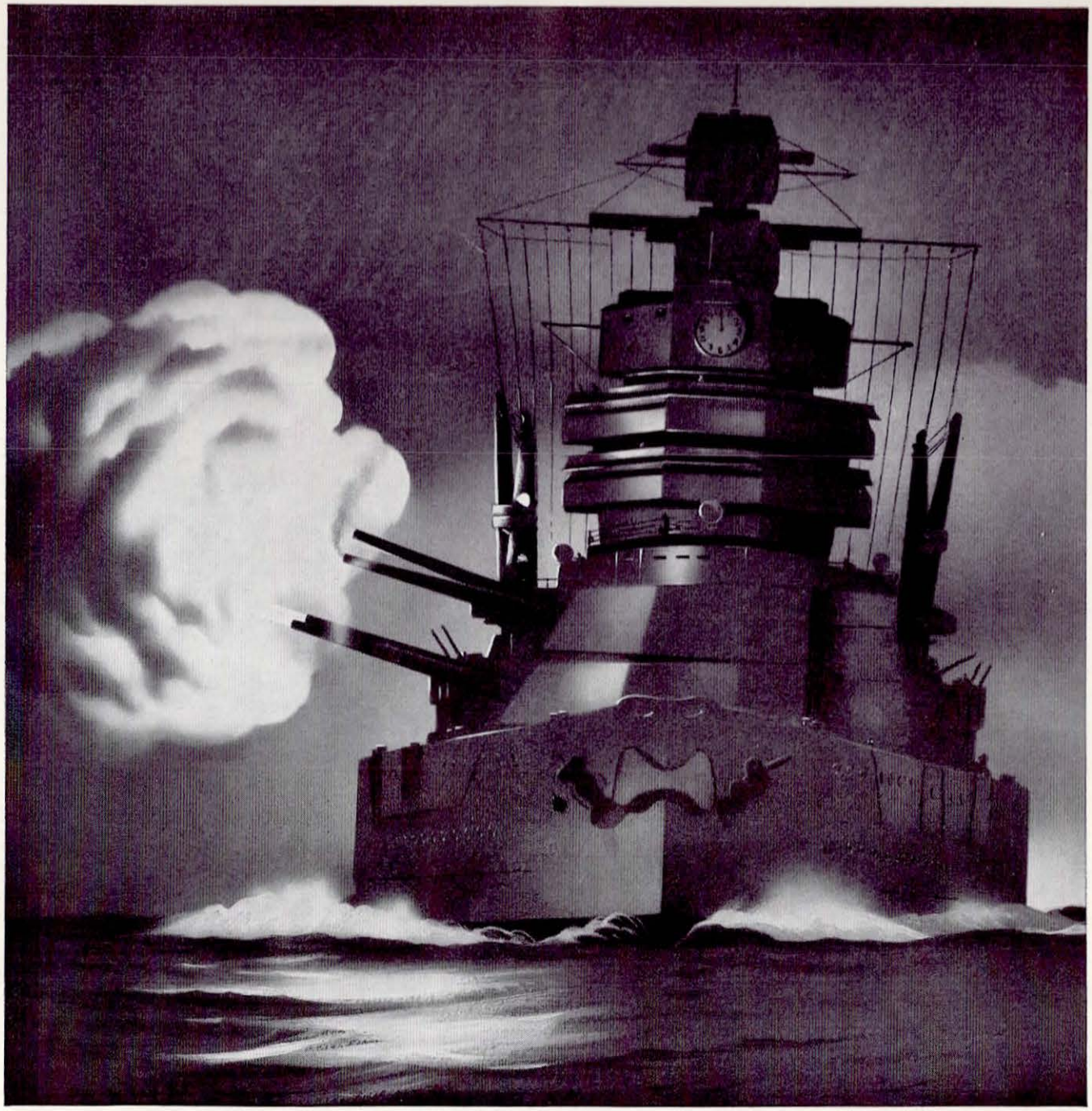
McCARTNEY LIBRARY
GENEVA COLLEGE

BECAUSE of the marked increase in normal passenger traffic and in addition the large number of trains required for the movement of our armed forces, the Louisville & Nashville, like many other larger railroads not having surplus heavy passenger power, has been forced to haul these extra passenger trains with freight locomotives . . . The need for freight power is extremely critical, and to relieve this condition most expeditiously, the L. & N. has ordered eight 4000 Hp. General Motors Diesel Road Locomotives, the first of which is scheduled to enter service in May . . . These eight GM Diesels will release 15 to 18 heavy steam passenger locomotives for extra passenger duty and in turn will release a substantial number of freight locomotives for service where they are so badly needed . . . The present plan is to assign four of these GM Diesels to handle "THE AZALEAN" and "THE PAN-AMERICAN" trains between Cincinnati and New Orleans and the remaining four Diesels to "THE SOUTHLAND" and "THE FLAMINGO" trains between Cincinnati and Atlanta.

WHO SERVES THE RAILROADS—SERVES AMERICA

ELECTRO-MOTIVE DIVISION

GENERAL MOTORS CORPORATION LA GRANGE, ILLINOIS, U.S.A.



MOLYBDENUM ENLISTS FOR THE DURATION

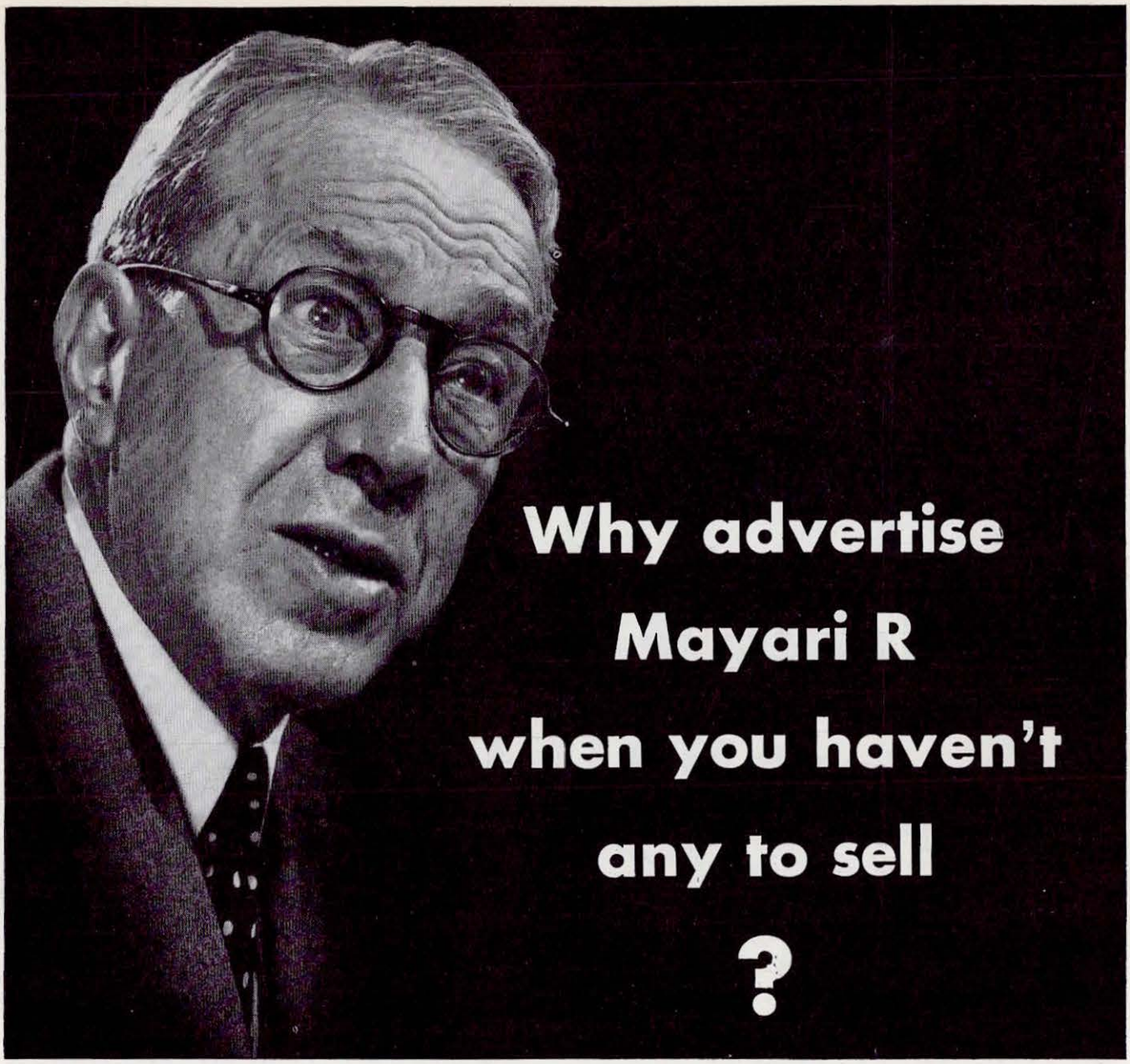
The enormous increase in requirements of molybdenum has necessitated the War Production Board Order M-110, placing molybdenum consumption under allocation control...Our metallurgical research staff is fully engaged in war work. At our mine, mill and converting plant, every effort is being made towards maximum production.

CLIMAX FURNISHES AUTHORITATIVE ENGINEERING DATA ON MOLYBDENUM APPLICATIONS.
MOLYBDIC OXIDE—BRIQUETTED OR CANNED • FERROMOLYBDENUM • CALCIUM MOLYBDATE

Climax Mo-lyb-den-um Company
500 Fifth Avenue • New York City

MOLY

Published weekly by Simmons-Boardman Publishing Corporation, 1309 Noble Street, Philadelphia, Pa. Entered as second class matter, January 4, 1933, at the Post Office at Philadelphia, Pa., under the act of March 3, 1879. Subscription price $6.00 for one year U. S. and Canada. Single copies, 25 cents each. Vol. 112, No. 17.



Why advertise Mayari R when you haven't any to sell ?

Although Mayari R is being produced in large tonnages, it is true that there isn't nearly enough to go round. Because of its weight-saving this high-tensile, low-alloy steel has proved itself a natural for gun carriages, tanks, Army trucks, and a lot of other mobile equipment. And war needs have first call, naturally.

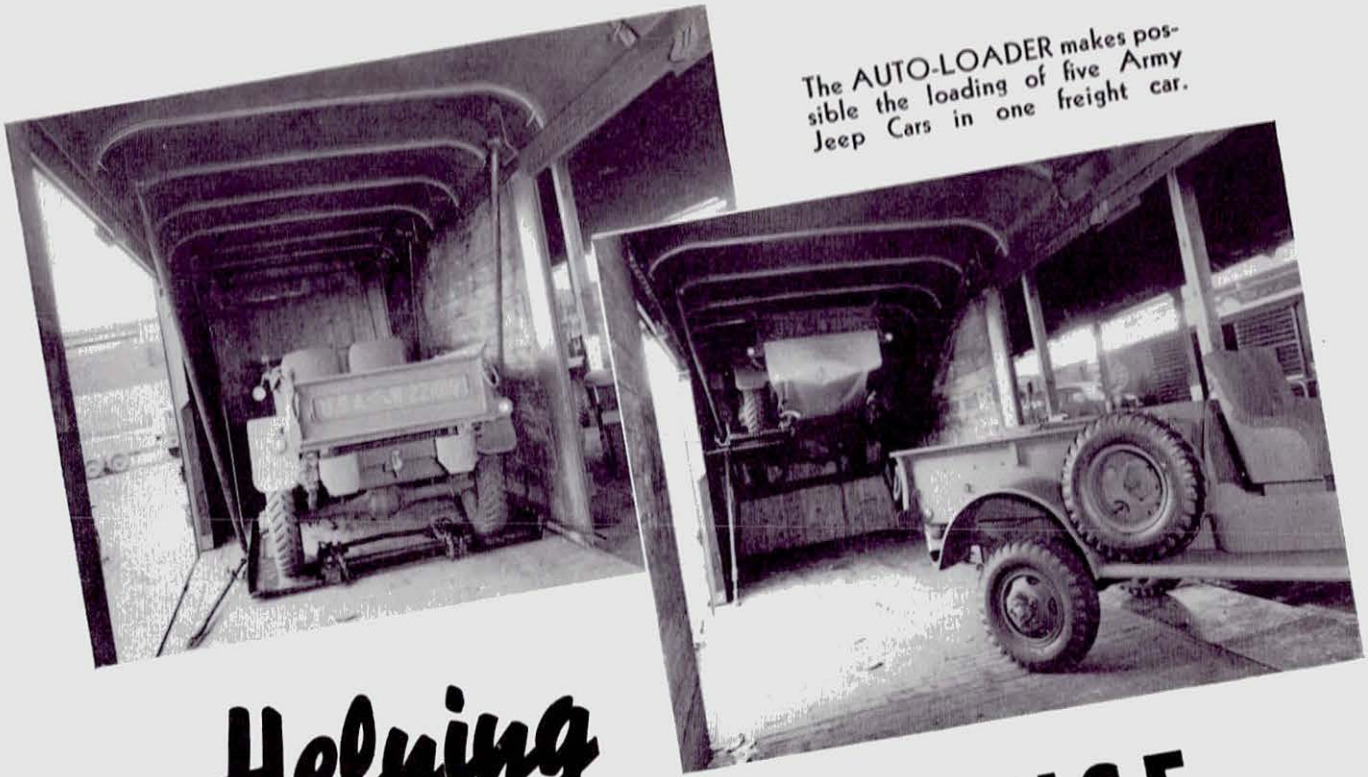
But that doesn't mean that there has been any cooling of our interest in those commercial customers who under normal conditions would be today the biggest users of Mayari R. We are appreciative of their past business. We regret that the necessity of winning a war prevents our filling their orders now, and are looking forward to supplying them when war demands subside.

In the meantime, we want to keep them informed about Mayari R, and to tell them from time to time of some of the ways in which this weight-saving steel is contributing to the war effort. We are sure that peace-time users will be glad to know that the Mayari R that normally would be coming to them is being used to good effect in a great cause.

There's another large group to which Mayari R advertising is directed: the thousands of men who today are rapidly advancing to key positions in war industries. Not only now but in facing future problems many of these men may find it advantageous to know about high-tensile, weight-saving Mayari R.

BETHLEHEM STEEL

BETHLEHEM STEEL COMPANY



The AUTO-LOADER makes possible the loading of five Army Jeep Cars in one freight car.

Helping NATIONAL DEFENSE

EVERY factor which will insure safe and speedy transportation of war materials is vital to the nation's program for Victory.

The AUTO-LOADER is helping National Defense by contributing to the safety of shipments and availability of railroad equipment. Hundreds of Army vehicles of all types are being transported daily in cars equipped with AUTO-LOADERS.

Faster loading and unloading has increased the average trips per car in this class of service from 5 per year to 15 per year. This represents freight car availability three times as great as formerly.

Repair costs on account of nail damage to floors and side walls on cars not equipped used to average from $90.00 to $110.00 per car per year. From carefully computed figures in 1939 the average annual repair cost to AUTO-LOADERS did not exceed $7.50 per car.

By eliminating dunnage costs the AUTO-LOADER helped to recapture a lot of traffic which had moved over the highways. More than 32,000 cars are now equipped. They have saved millions of dollars for the railways.

EVANS PRODUCTS COMPANY
DETROIT

Evans EVANS Products

THE AUTO LOADER

"WAR-TIME ON THE RAILROAD"

calls for round-the-clock service...

- Scale free boilers qualify for this strenuous war-time service. Shopping tickets give way to OK's for "doubling back." Dearborn Engineer helps you eliminate scale forming ingredients.
- He makes a study of each water station in cooperation with your own water chemists, or independently if you so desire. Water samples are analyzed and checked in our laboratories. Scientific treatment to meet your specific need is recommended. Dearborn Engineer selects proper type automatic chemical feeding equipment, assists your forces in correct installation, supervises initial operation, and thereafter makes periodic service checks.
- Over 200 railroads depend upon Dearborn service. There's a Dearborn Engineer nearby to serve you.

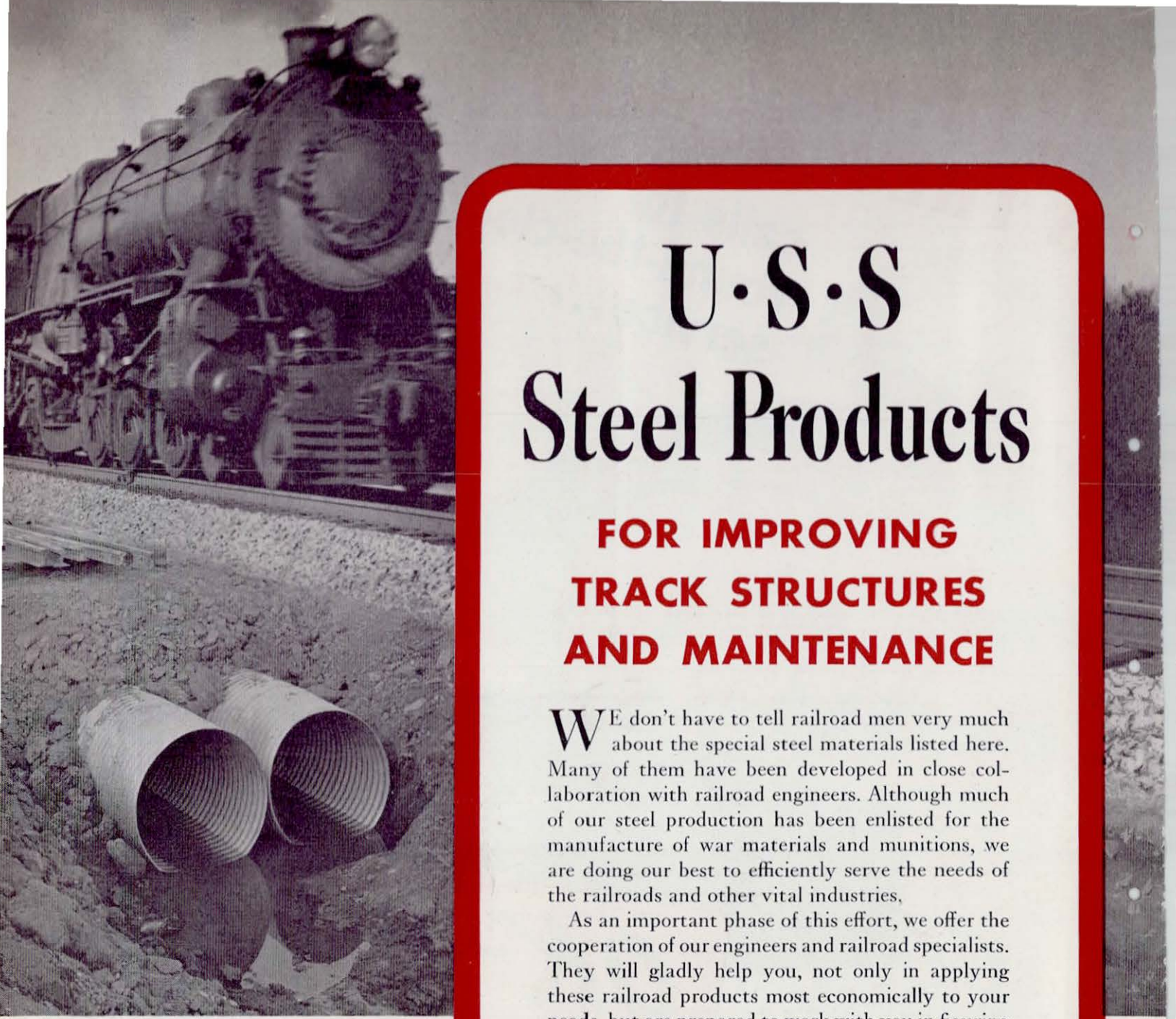
DEARBORN CHEMICAL COMPANY

CHICAGO	310 S. Michigan Ave.
NEW YORK	205 E. 42nd St.
LOS ANGELES	807-15 Mateo St.
TORONTO	2454 Dundas St., West

Dearborn

TRADE MARK REGISTERED

SCIENTIFIC WATER TREATMENT



U·S·S Steel Products

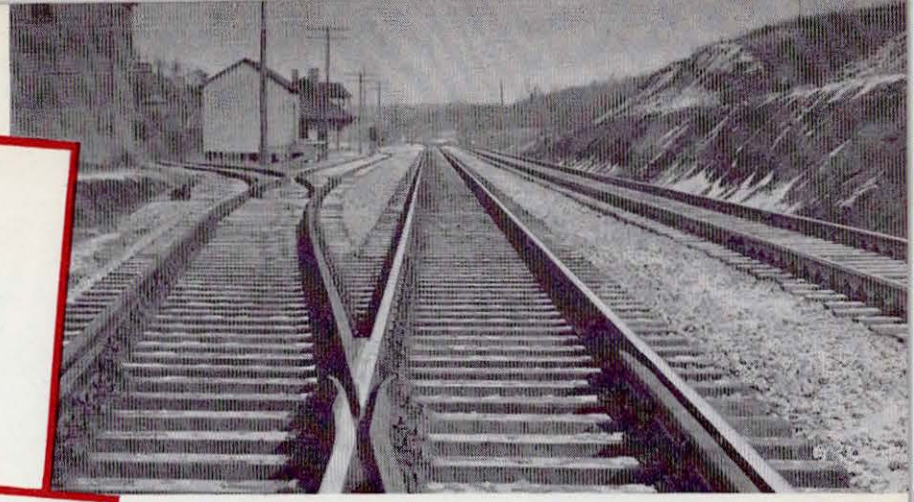
FOR IMPROVING TRACK STRUCTURES AND MAINTENANCE

WE don't have to tell railroad men very much about the special steel materials listed here. Many of them have been developed in close collaboration with railroad engineers. Although much of our steel production has been enlisted for the manufacture of war materials and munitions, we are doing our best to efficiently serve the needs of the railroads and other vital industries.

As an important phase of this effort, we offer the cooperation of our engineers and railroad specialists. They will gladly help you, not only in applying these railroad products most economically to your needs, but are prepared to work with you in figuring out alternate constructions that may save steel for other essential national requirements.

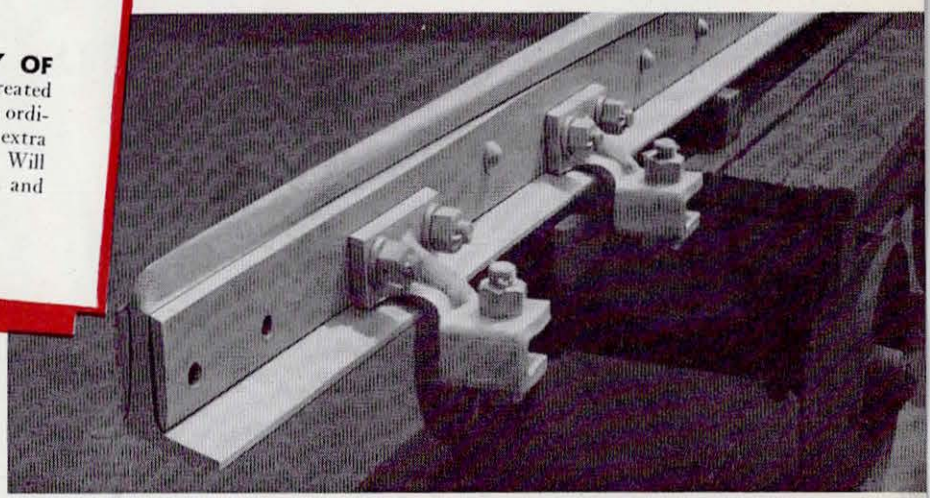
U·S·S CORRUGATED METAL CULVERTS. The railroad's extensive use of corrugated metal culverts for track sub-drainage is based on their well-demonstrated efficiency in eliminating roadbed soft spots. They combine large drainage capacity with great strength to withstand the pound of heavy fast trains and to resist the stresses of soil movements in extreme weather conditions. Their quick and easy installation, with the minimum of traffic interruption, also justifies their use.

U·S·S STEEL SHEET PILING. Particularly useful for speeding up construction of freight terminal docks and wharfs, and for retaining walls, jetties and revetments of all kinds. Great strength, long life, low cost installation and low expense for maintenance also make this piling economical construction for railroad bridge piers and abutments, where it can be used as an easily driven cofferdam which can be left in place to act as a permanent form for concrete filling. When desired, it pulls easily and can be used over and over.



TRACK THAT WILL STAND UP. Higher on the list of safer, lower maintenance trackwork materials are U·S·S Steel Rails, as well as Joint Bars, Tie-Plates, Spikes, Switches, Switch-stands, Frogs, Crossings and Guard Rails. Improved steels and improved fabricating techniques have added years of life to this equipment.

REDUCE WEAR AND INCREASE SAFETY OF SWITCHES— with this new U·S·S Lorain Heat Treated Switch Point. Switch records prove that it outwears ordinary switch points 3 to 4 times. Easily saves its slight extra cost and eliminates an important cause of tie-ups. Will greatly reduce point spalling, breakage, head wear and cracks through holes.



U·S·S STEEL BEARING PILES. Ease of driving, faster construction, deeper penetration and economy recommend these superior H-piles. Unequalled in providing a safe anchorage for all substructures subject to erosion and wash under extreme run-off conditions. Railroad engineers have found U·S·S Steel Bearing Piles a valuable ally in their struggle against floods, fast water and shifting river beds. As used above in a new, fast, economical way to build retaining walls, this construction avoids costly foundation excavation, requires no track support during building.

U·S·S CONCRETE REINFORCING BARS. Made full size, cleanly rolled from new billet steel to standard specifications. These well-known bars are indispensable where strength is necessary in concrete work. Distributors located in all principal cities insure least delay in delivery.

U·S·S STEELS *for* RAILROAD USE

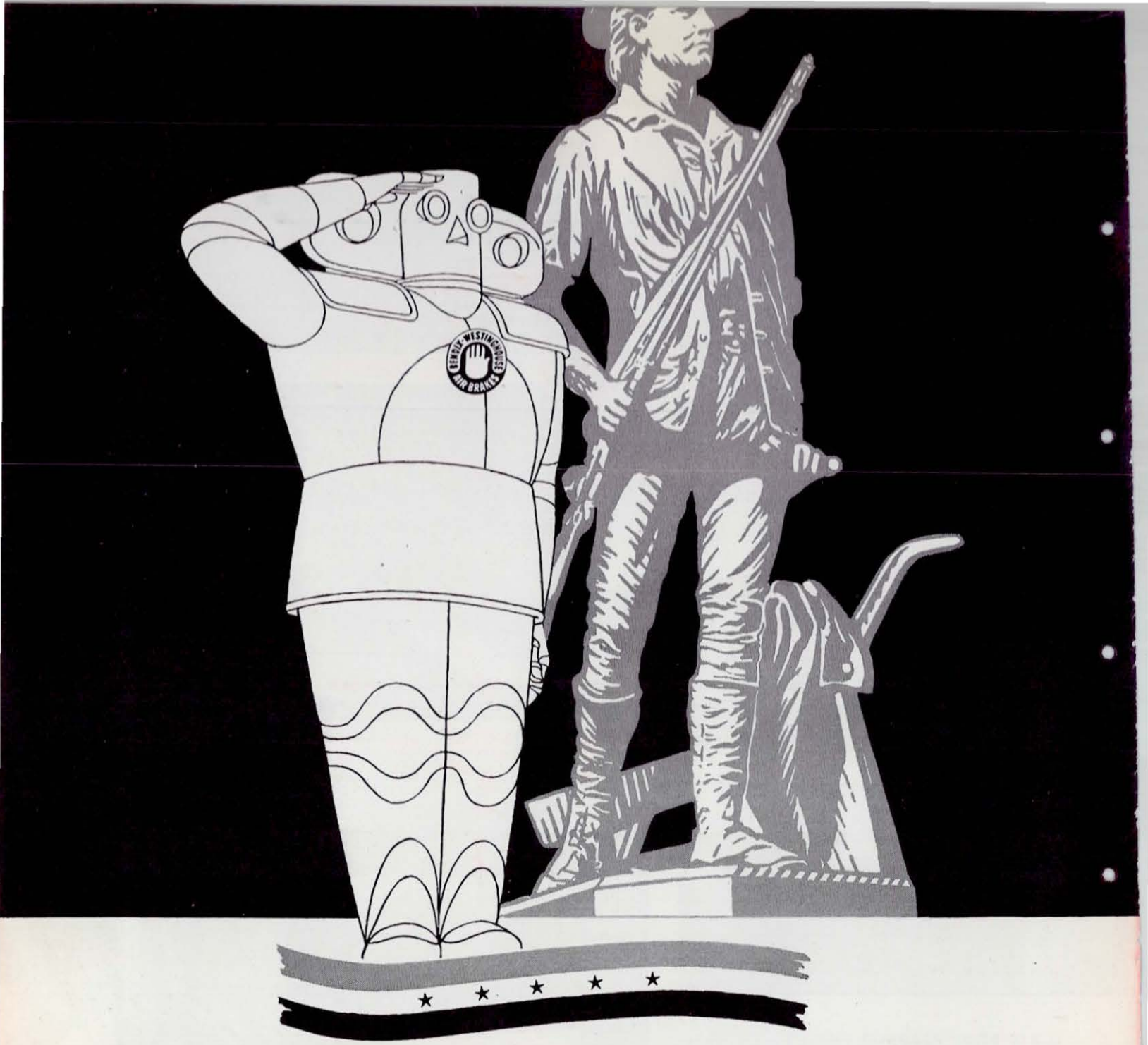
CARNEGIE-ILLINOIS STEEL CORPORATION

Pittsburgh and Chicago

Columbia Steel Company, San Francisco, *Pacific Coast Distributors* · United States Steel Export Company, New York

USS

UNITED STATES STEEL



TODAY...IT'S THE SPLIT-SECOND MAN

Never more drastically has the turn of world events forced an entirely new era of thought and action ★ By comparison, yesterday's methods become pathetically inadequate ★ Action! as only America understands it, becomes a timely byword . . . And, quite aware of the role it is destined to play, Bendix-Westinghouse offers its entire resources that your vital commercial motor carriers might roll even more safely, dependably and economically ★ If you haven't already, it's time you investigated genuine Bendix-Westinghouse Air Brakes and Air Control Devices which will not only "up" the usefulness of your current equipment but successfully prolong its efficiency and service life ★ There's a coast-to-coast network of authorized Bendix-Westinghouse Distributors ready to serve you and the nation. Consult your local telephone directory for the one nearest you.

BENDIX-WESTINGHOUSE AUTOMOTIVE AIR BRAKE CO.
ELYRIA, OHIO

AN ORGANIZATION WHOSE UNDIVIDED EFFORT AND COMPLETE RESOURCES ARE DEVOTED TO YOUR CONVENIENCE AND SAFETY

SIMPLEX

UNIT CYLINDER CLASP BRAKES

ROLL CALL OF PURCHASERS FOR 1941

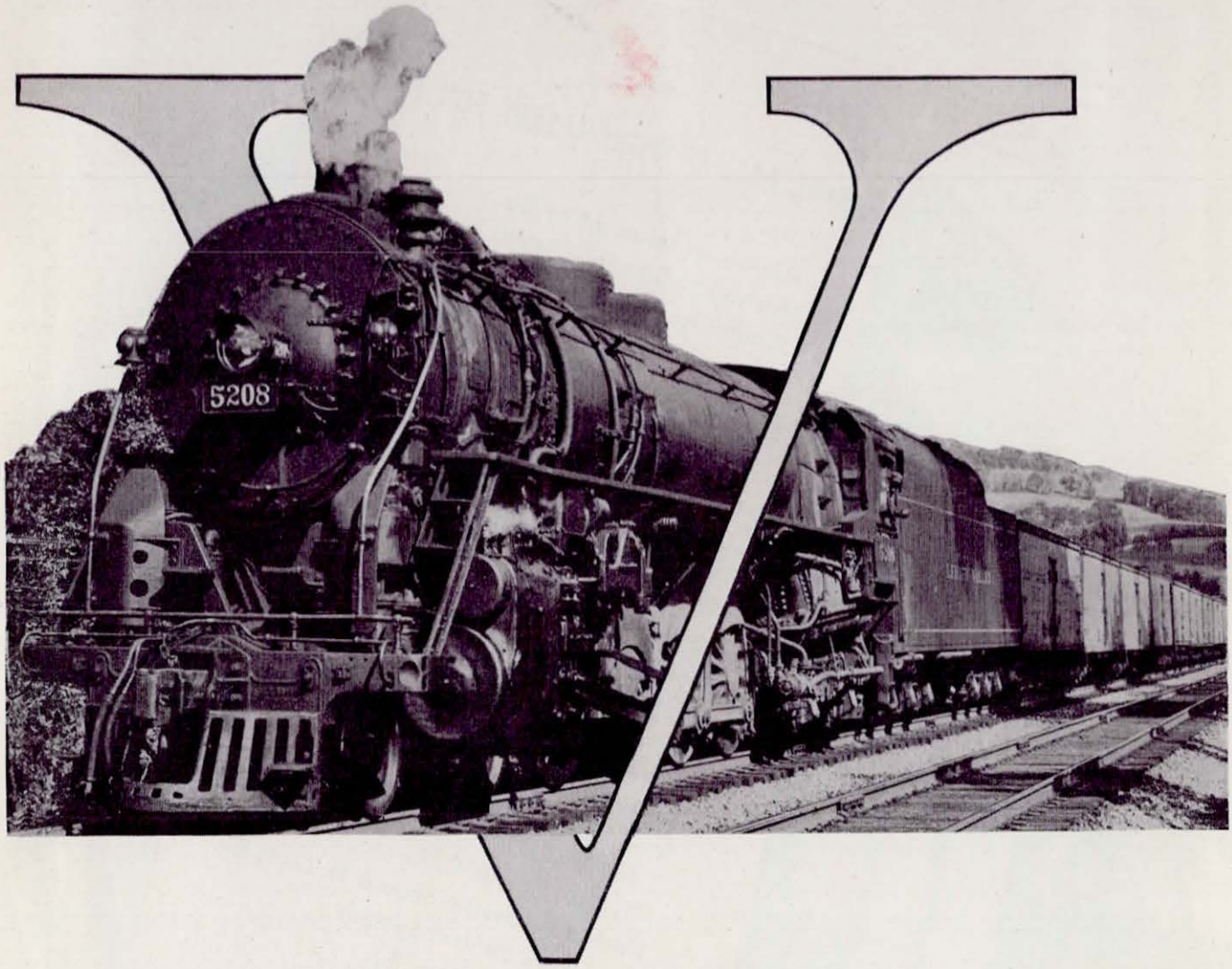
American Locomotive Co.
Atchison, Topeka & Santa Fe Ry.
Canadian National Rys.
Canadian Pacific Ry.
Chicago & North Western Ry.
Chicago, North Shore & Milwaukee R. R.
Chicago, Rock Island & Pacific Ry.
Clinchfield R. R.
Delaware & Hudson R. R.
Denver & Rio Grande Western R. R.
Electro-Motive Corp.
Florida East Coast Ry.
Grand Trunk Western Ry.
Gulf, Mobile & Ohio R. R.
Illinois Central R. R.
Louisville & Nashville R. R.
Minneapolis, St. Paul & Sault Ste. Marie Ry.
Missouri Pacific R. R.
Nashville, Chattanooga & St. Louis Ry.
New York Central System
Norfolk & Western Ry.
Northern Pacific Ry.
Pennsylvania R. R.
Pullman Company
Richmond, Fredericksburg & Potomac R. R.
St. Louis—San Francisco Ry.
Southern Pacific R. R.
Union Pacific R. R.
Western Pacific R. R.

Simplex Clasp Brakes make it possible to stop high speed trains quickly, quietly and safely.

AMERICAN STEEL FOUNDRIES

Rolling On to Victory

"RAILWAY" SPRINGS CARRY THE LOAD



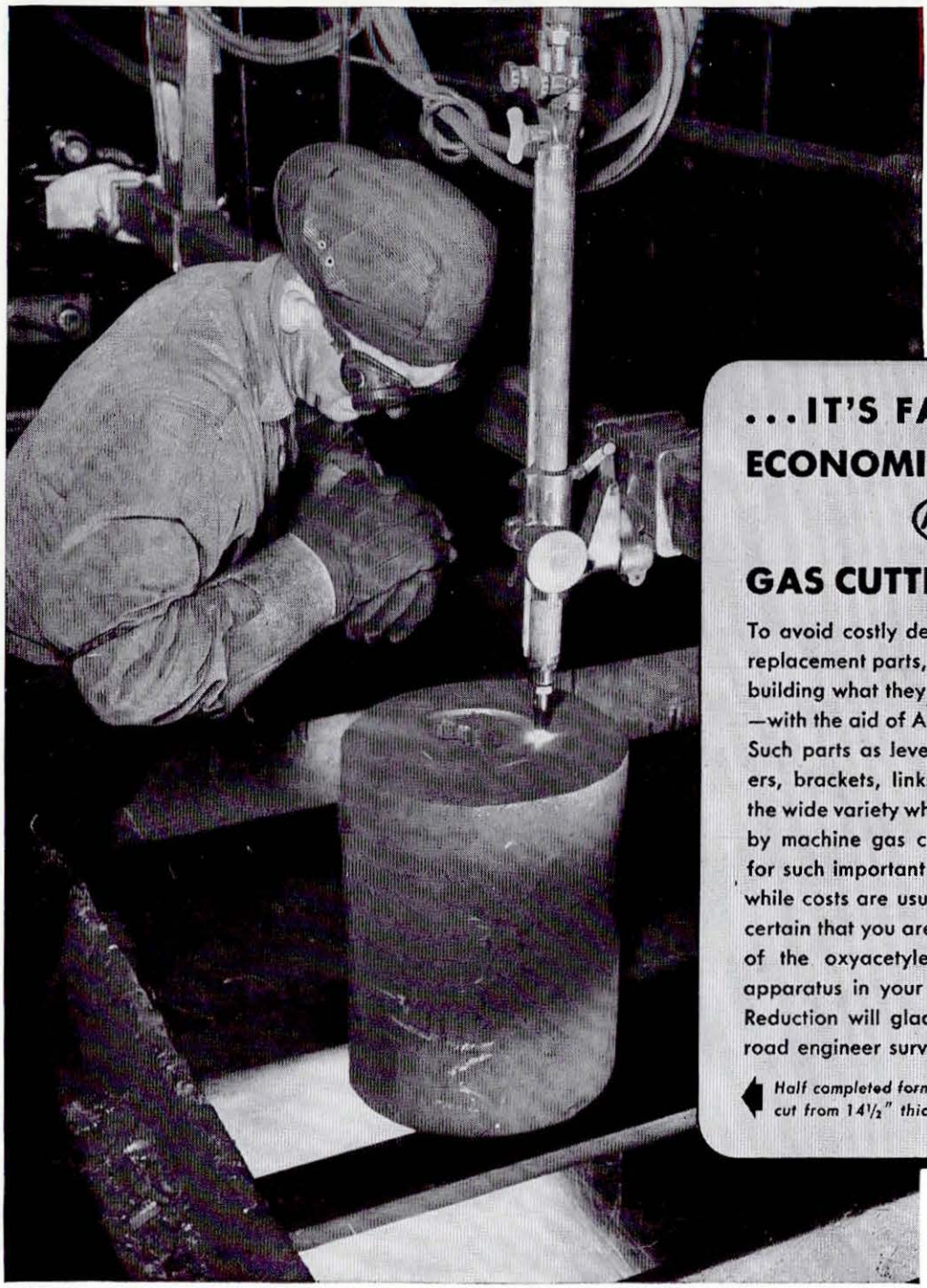
THE supreme effort conducive to victory requires an all out employment of every piece of railway rolling stock in the country. Cars and locomotives provided with Railway Easy Riding Springs are well equipped to protect load, equipment and track during most intensive use.

AMERICAN LOCOMOTIVE COMPANY

Railway Steel Spring Division

30 CHURCH STREET, NEW YORK. N. Y.

MAKE THE REPLACEMENTS YOU NEED



—and avoid emergency delay

...IT'S FAST, SIMPLE, ECONOMICAL WITH AN AIRCO GAS CUTTING MACHINE

To avoid costly delay in securing important replacement parts, many railroads are today building what they need—in their own shops—with the aid of Airco gas cutting machines. Such parts as levers, bars, cranks, equalizers, brackets, links and hooks, are among the wide variety which are readily fabricated by machine gas cutting. The time required for such important jobs is surprisingly short, while costs are usually the lowest. » » Make certain that you are taking fullest advantage of the oxyacetylene welding and cutting apparatus in your shop. Upon request, Air Reduction will gladly have a practical railroad engineer survey your shop operations.

Half completed forming bushing being machine gas cut from 14½" thick steel.

Air Reduction

General Offices: 60 EAST 42nd ST., NEW YORK, N. Y.

IN TEXAS
MAGNOLIA-AIRCO GAS PRODUCTS CO.
General Offices: HOUSTON, TEXAS
OFFICES IN ALL PRINCIPAL CITIES

AIRCO WILSON

SERVING RAILROADS FROM COAST TO COAST

a.c.f.

for Excellence... ...in production

The award of the "E", since 1906 the traditional NAVY symbol for excellence, was made to the A.C.F. Wilmington Plant on April 2, 1942, by Admiral William Carleton Watts, representing the Secretary of the Navy, Hon. Frank Knox. The ceremonies included the launching of another Minesweeper for the United States Navy at the A.C.F. Wilmington, Delaware shipyards.

We're building fighting

TANKS....

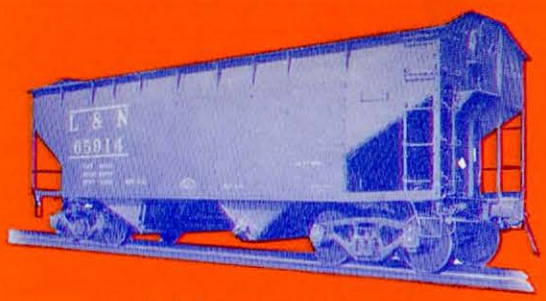
and producing fighting

SHELLS *and armor plate—*

we're building fighting

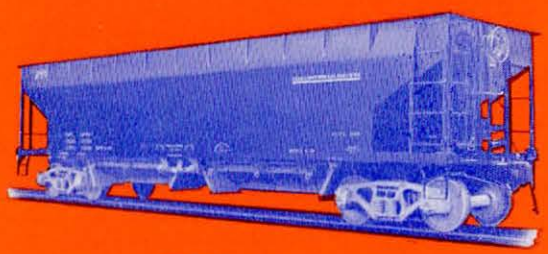
FREIGHT CARS, TOO!

"For the success of our armed forces depends almost completely upon the efficiency of our transportation."

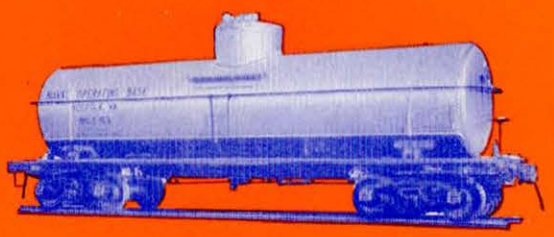


A.C.F. TWIN HOPPER CAR

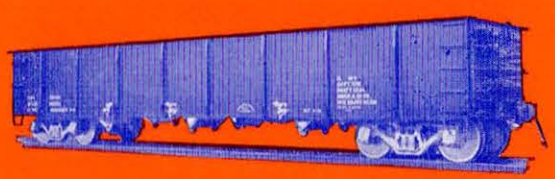
A.C.F. BOX CAR



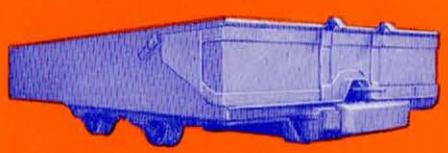
A.C.F. BALLAST CAR



A.C.F. TANK CAR



A.C.F. GONDOLA CAR



A.C.F. MINE CAR

Whatever A.C.F. builds—it is known to build well!

WHAT'S THE *FIGHTING* POWER OF A FREIGHT CAR? It's unarmed, and it's unarmored . . . yet a hundred new freight cars, today, may put an extra dozen bombers in the air, tomorrow!

A thousand new freight cars may crush a fierce and resourceful enemy beneath an impassable barrage! A hundred thousand new freight cars may bring that added edge in man power and in fire power to sweep on to victory!

The railroads have worked wonders with the cars now on hand—but to win this war is going to take more cars, a lot more cars. A.C.F. has the "know-how" to build freight cars and build 'em well!—won from front line experience through all but the earliest years of the history of this nation's railroads, *and through service to them and to our country in four wars.*

Despite our other extensive war work, A.C.F. is 100% ready to build these cars as they are called for—first-line units for America's unconquerable fighting machine!

AMERICAN CAR AND FOUNDRY COMPANY

NEW YORK · CHICAGO · PHILADELPHIA · ST. LOUIS · CLEVELAND · PITTSBURGH · ST. PAUL · SAN FRANCISCO

How Many Men does One Eye Injury Hurt?

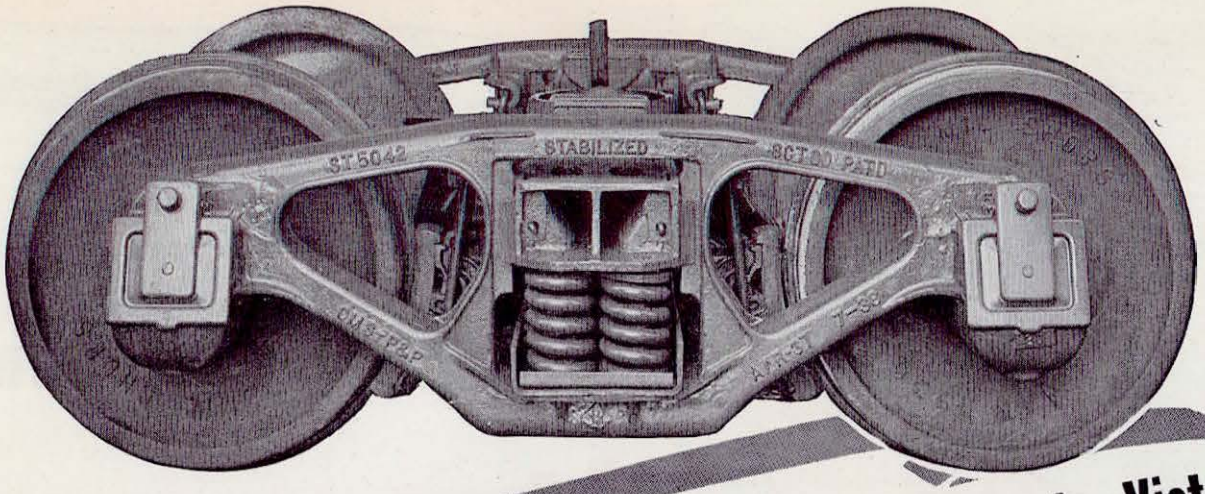
When one member of a crew suffers an eye injury, the affects of the accident are felt throughout part of or the *entire* system. For, here are some of the things that follow an eye accident. Work stops temporarily. Morale is weakened. The crew become short-handed. Time is lost. Costs go up.

American Optical Company has devoted many years to the cause of better eye protection and offers you a complete line of safe, comfortable goggles for every type of eye hazard in railroading. And your AO Safety Representative offers your Safety Director every kind of cooperation in the installation and maintenance of a complete eye-and-dollar-saving eye protection program.

THE American Optical COMPANY

SOUTHBRIDGE MASSACHUSETTS

GET EYE ACCIDENTS OUT OF YOUR SYSTEM — WITH AMERICAN OPTICAL GOGGLES



★ ★ ★ ★

Freight Cars-as well as War Materials-Are Vital for Victory-Trucks with STABILIZED PARTS PROTECT 'EM BOTH!

Specify Stabilized Parts for Trucks on new and rebuilt cars . . . and you give these cars and the vital war lading they carry utmost protection from the countless jars and bumps they receive in speeding to their destination.

At small cost, these Stabilized Parts are built into the bolsters . . . where they eliminate all looseness and produce sufficient friction to minimize excessive spring bouncing and harmonic action. Trucks are assembled initially tight and *stay tight*—as any slight wear on the friction casting is automatically taken up.

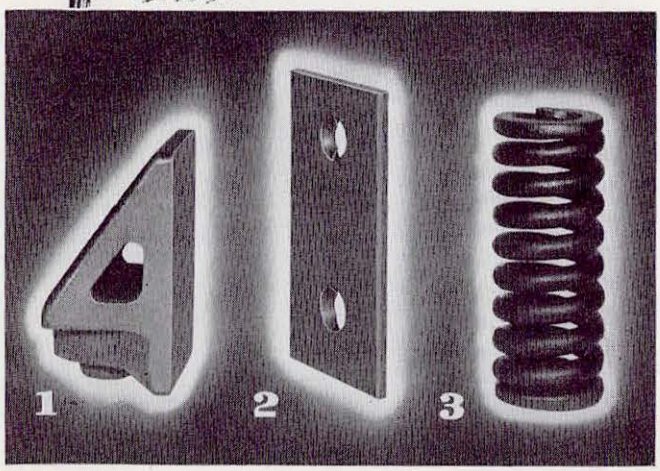
Cars with Stabilized Trucks get a smooth, floating ride — free of the excessive spring bouncing that is so destructive to equipment and lading.

Over 58,000 Car Sets Of Stabilized Trucks Giving Satisfactory Service On 44 Roads and Private Car Lines

STANDARD CAR TRUCK COMPANY

332 So. Michigan Ave. **Chicago, Ill.**

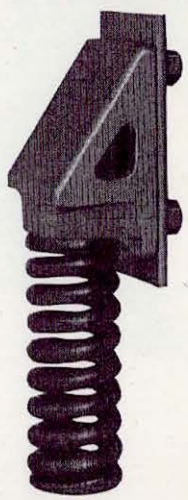
★ ★ ★ ★



The Stabilized Parts Consist of:

1. Friction Casting with large friction-bearing area
2. Spring Steel Wear Plate
3. Friction - Casting - Supporting Side Spring

At small cost, they are built into new trucks for new and rebuilt equipment. So specify these Stabilized parts . . . for the protection your cars and lading need under today's wartime conditions.



Gain Safety by Anticipating Danger

Universal BRAKE BEAM SAFETY SUPPORT

In the prevention of railroad accidents, one of the most vital spots to be protected is the brake beam assembly of a freight car. The Grip Nut Company, in the interest of guarding this assembly, presents a new Brake Beam Safety Support with startling features of economy and service.

The protection of foundation brake gear is of great importance. Of all railroad equipment, it is the most used and abused, yet its function is indispensable in railroad operation, and, in case of failure or loss of brake beam hangers, it presents an immediate menace by dropping on the track.

In event of hanger failure, the Universal Brake Beam Safety Support carries the brake beam and permits normal braking into the terminal. This avoids derailment by keeping the brake beam clear of the track.

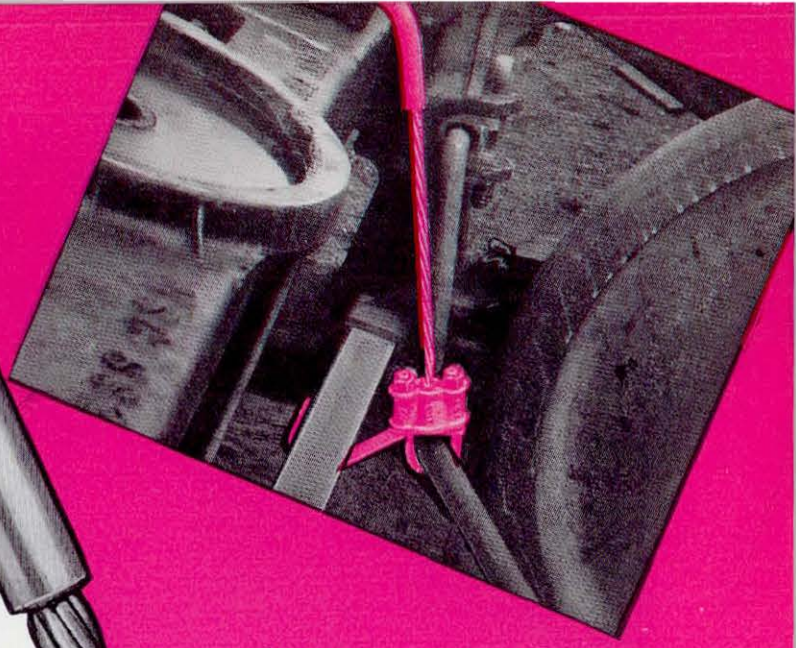
Due to its low cost, light weight, ease of installation, and adaptability, the application of this device to rehabilitated as well as new freight cars is particularly desirable.

AT LEFT—Illustration shows Universal Brake Beam Safety Support attached to tension rod.

AT RIGHT—Illustration shows addition of safety guard for compression member.

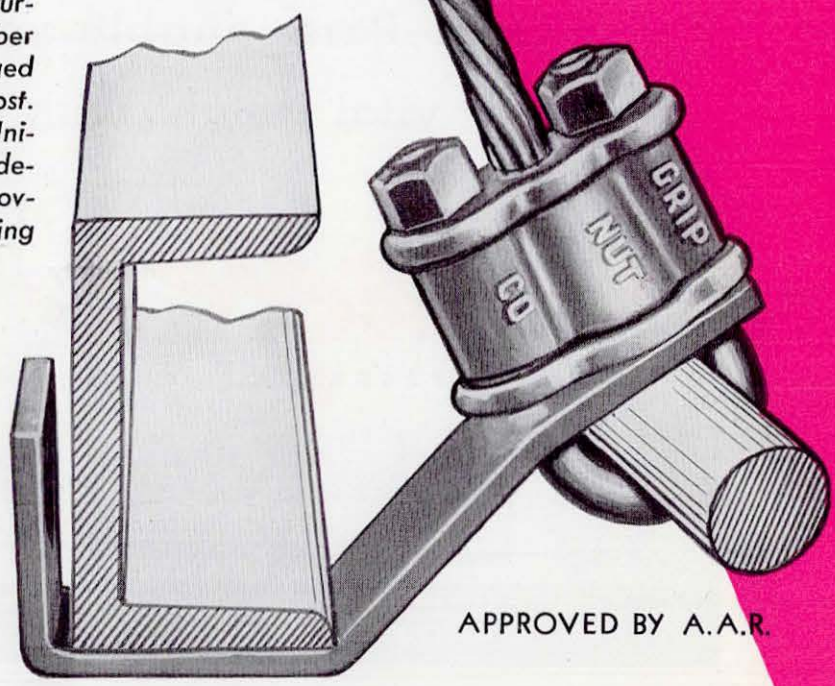
One Type For All Types

We will be glad to furnish further details and quotations upon request



Following are the principal advantages gained through the use of the Universal Brake Beam Safety Support:

1. *Only one design required to suit any freight car truck (spring plankless or conventional type).*
2. *Easy and economical installation: Apply only sixteen "U" bolt nuts; an operation that con be effected wherever a car is standing under blue flag protection. Only one man is necessary, his single tool a ½-inch wrench.*
3. *No part suspended from truck by means of bolts or rivets: Result—installation cost and dead weight reduced. Possibility of loss by vibration lessened. Weakening of spring plank by drilling avoided.*
4. *Complete elimination of moving parts: All possibility of wear thus prevented and maintenance costs made negligible.*
5. *All parts in a state of tension or straight pull while functioning—no part subjected to bending moments.*
6. *Simple design results in minimum number of parts and substantial reduction of dead weight.*
7. *Ample strength to give a 5.7 factor of safety.*
8. *Principle of suspension eliminates overhanging weight which, due to vibration, often results in spring plank failures.*
9. *In the frequent failure of tension rods, a tight connection of the "U" bolt holds rod out of danger zone, preventing possible derailment.*
10. *A simple, effective and inexpensive guard, assuring further safety by holding compression member out of danger zone in event it becomes disengaged at brake head, is furnished at slight additional cost.*
11. *To replace brake beams, only one side of the Universal Brake Beam Safety Support need be detached—a further advantage in facilitating removing and replacing brake beams, and minimizing danger of support not being maintained.*



GRIP NUT COMPANY

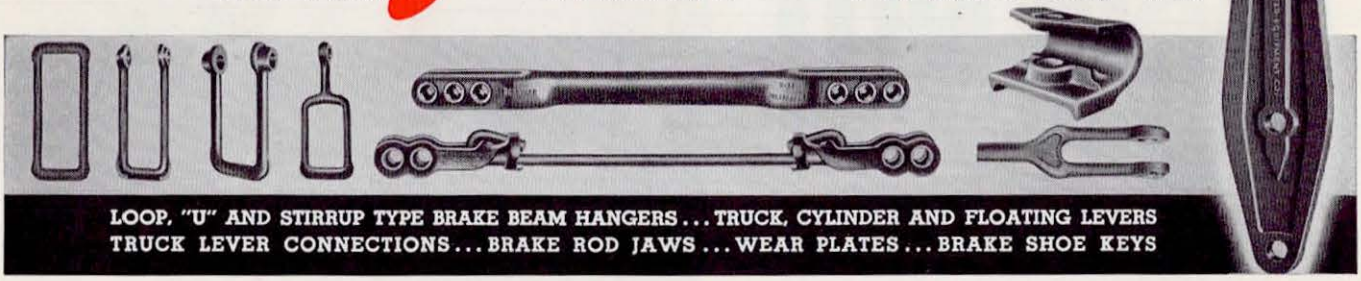
310 SOUTH MICHIGAN AVE.
CHICAGO, ILLINOIS

APPROVED BY A.A.R.

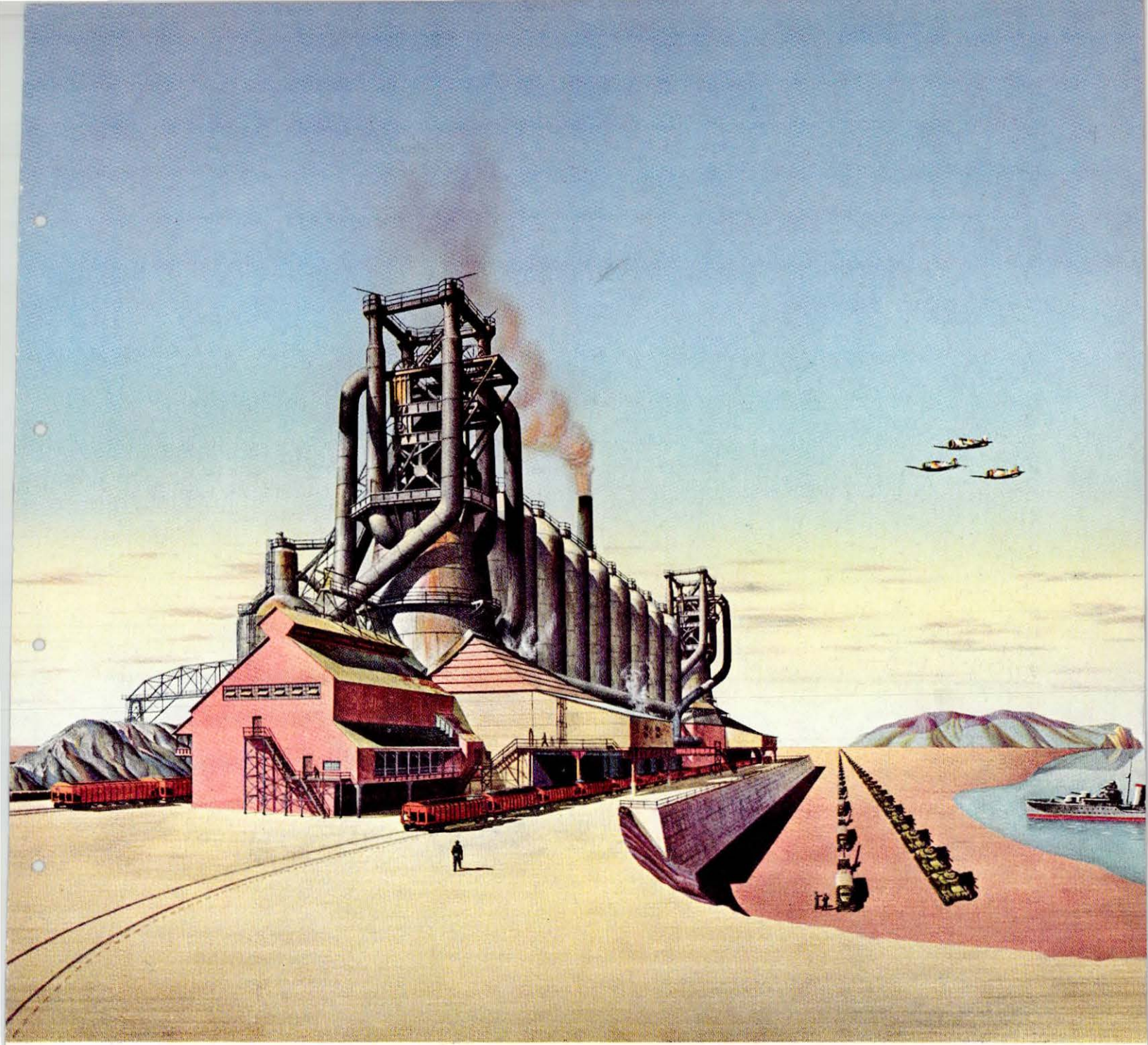
Schaefer Forged Steel Foundation Brake Gear Parts enable you to haul today's vital freight with greater safety

Schaefer EQUIPMENT COMPANY

KOPPERS BUILDING • PITTSBURGH, PA.



LOOP, "U" AND STIRRUP TYPE BRAKE BEAM HANGERS... TRUCK, CYLINDER AND FLOATING LEVERS
TRUCK LEVER CONNECTIONS... BRAKE ROD JAWS... WEAR PLATES... BRAKE SHOE KEYS



Steel Is More Precious Than Gold

At the most critical moment in our history, we bury our gold in some mid-western field, and work frantically to produce more and more of the steel which is far more precious to us *now*, than gold.

This is a *steel* war. The greatest hope of mankind is the fact that America alone can produce 50% *more* steel than all the Axis-dominated countries.

The process of steel-making starts at the blast furnace, and a blast furnace needs enormous quantities of coke. Censorship forbids us to tell how greatly coke production has been increased with new Koppers coke ovens, but it is a heart-warming figure.

These ovens convert millions of tons of coal into coke, gas and other products, vast quantities of which are further processed by Koppers into chemicals used in the explosives, plastics, synthetics, rubber, dyes and drugs now so important to military success.

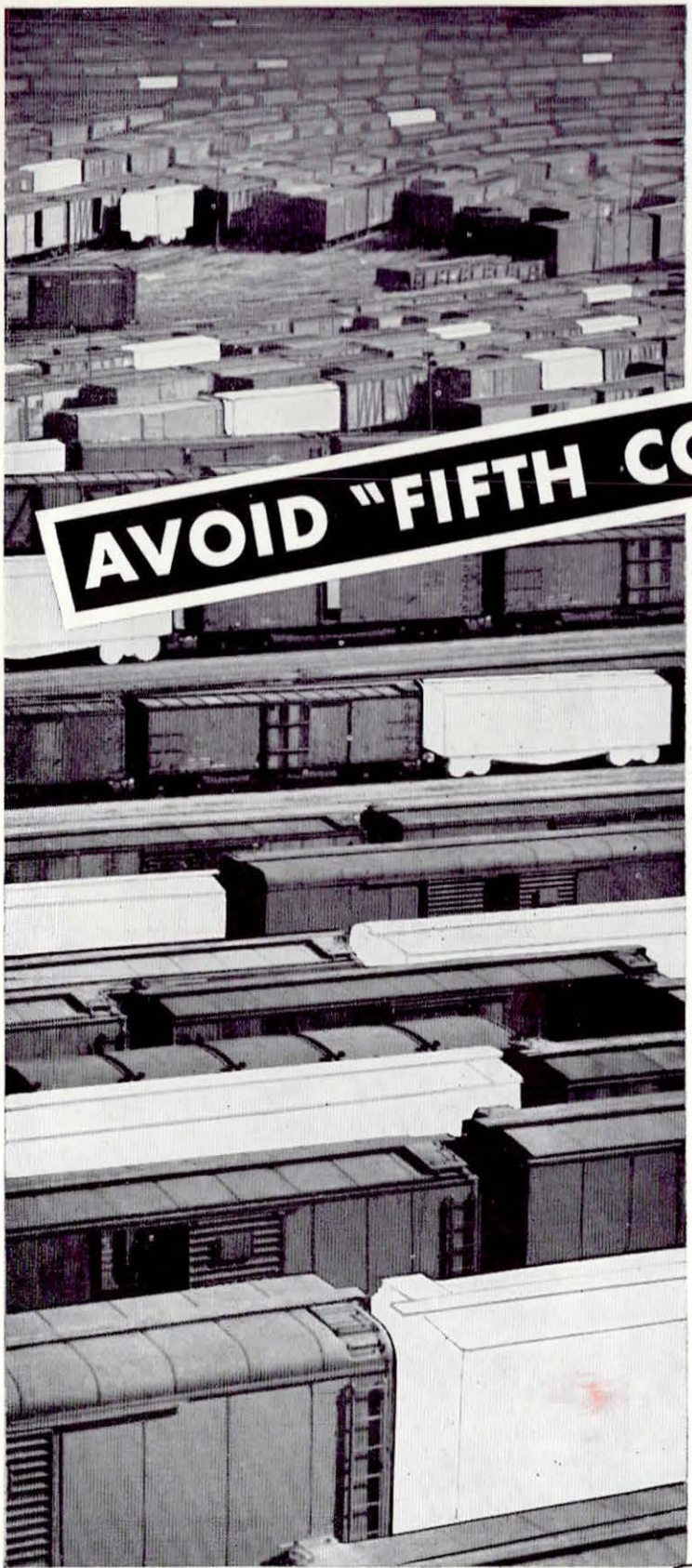
Among the many products Koppers has furnished for years to the steel industry are Fast's self-aligning couplings; special D-H-S Bronze for gears, slippers, segments, housing nuts, and bearings; iron gate valves; pressure-treated ties and timber; roofing, waterproofing and road materials; piston rings; deodorants and disinfectants.

These products help make it possible to produce ever-increasing quantities of steel for tanks, guns, planes, ships and munitions. *It's up to American Industry.* Koppers Company, Pittsburgh, Pa.

KOPPERS

THE INDUSTRY THAT SERVES ALL INDUSTRY

BUY UNITED STATES DEFENSE WAR BONDS AND STAMPS



AVOID "FIFTH COLUMN" CARS!

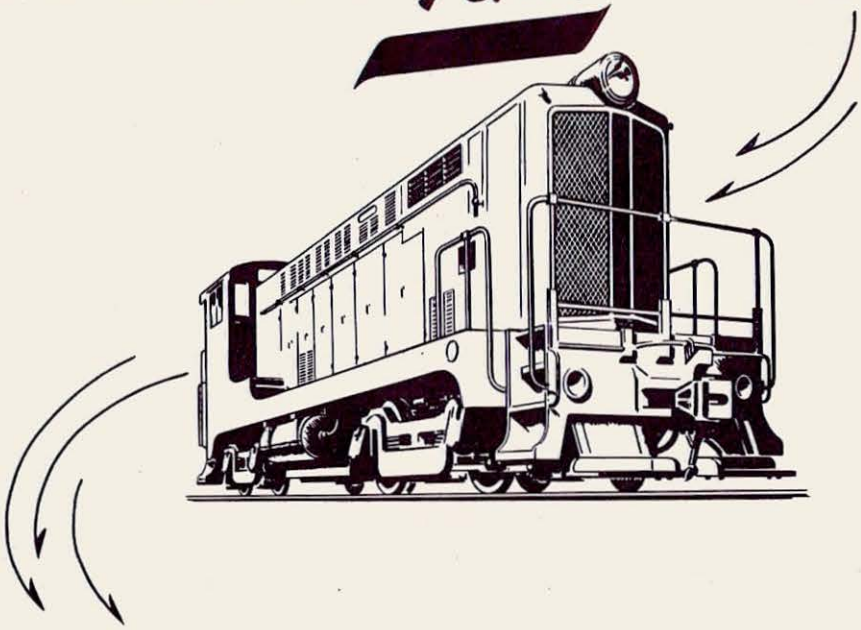
CARS with bearing failures work for the enemy. Every hour lost for repairs can mean days lost for our fighters anxiously waiting for supplies.

Our Car Journal Bearings and Babbitt Metals are designed for longer wear. They avoid hot boxes and reduce lay-offs to a minimum. Our Bronze Engine Castings help make your engines sturdier and more resistant to the strain under which they must work in future.

We have been serving the railroads for 68 years. We shall continue serving you in these times as fast as priorities permit. You will find us always ready and willing to cooperate with you on any of your problems within our scope.

NATIONAL BEARING
METALS CORPORATION
NEW YORK—ST. LOUIS

If you are interested in *fast* switching



Baldwin Diesel-Electrics are the *answer*

Here are some of the advantages you get with Baldwin Diesel-Electric switching locomotives:

1. High starting torque
2. Rapid acceleration in the low speed ranges
3. High availability
4. Easy access for inspection and maintenance
5. Stand-by losses reduced to a minimum
6. Elimination of coal and ash handling equipment
7. Low fuel cost
8. Exceptional visibility for the operator

With its long experience in the locomotive business, Baldwin is especially fitted to interpret the needs of the railroads. Baldwin has been working with and for the railroads since 1831.

Baldwin De La Vergne diesel engines and Westinghouse electrical transmission equipment are added assurance of the correct engineering and rugged construction needed to meet the severe requirements of railroad service.

In this time of National emergency, when freight must move without delay through yards and terminals, Baldwin Diesel-Electrics are doing their part on the lines of 36 railroads.

THE BALDWIN LOCOMOTIVE WORKS

BLW THE BALDWIN GROUP

Philadelphia

Freight Progress in War Number

A Timely War Survey

. . . of railway freight service, equipment and facilities, reaching all the groups that exert a vital influence in "keeping the freight rolling."

First Forms Close May 8

MAY 23 ★ 1942 ★ ISSUE

The May 23 Issue Will Emphasize the Railways' Part in the War Program

IN its May 23 issue, the *Railway Age* will organize and present a wealth of timely data on the railroads' big job of providing adequate wartime freight service. This issue, in its entirety, will be a survey of "Freight Progress in War" . . . a subject of vital importance at this time . . . because the nation's steadily expanding war production program is geared to railway transportation.

Railway Materials Essential

"There is no use making it if you can't move it." That is why it is so important to keep essential railway materials and equipment flowing from the manufacturers to the railroads. The railroads have come through with flying colors . . . but they must have the equipment, tools, materials and co-operation necessary to keep up the good work.

Editorial Program and Distribution

To crystallize this situation, the May 23 issue will explore editorially the many phases and problems of railway freight service in wartime. Its distribution will be almost 2½ times the usual *Railway Age* circulation, reaching all the groups that exert a vital influence in "keeping the freight rolling." In addition to its regular distribution, copies will go to the nation's shippers . . . to the key personnel of the War Production Board and the Office of Defense Transportation . . . to members of Congress . . . to Army Quartermasters. This issue will have some 13,000 extra circulation among these groups.

The Railroads' Participation

So much of the railways' success in meeting the increased demands hinges upon decisions and co-operation outside the industry that a clear and authoritative picture of freight progress in war outside the industry is imperatively needed now. In the advertising pages, therefore, the railroads individually have an outstanding opportunity, at a most important time, to tell about their specific services in wartime. A large number of railroads have already completed plans for advertising in this issue.

The Manufacturers' Part

So largely is freight progress in war a matter of equipment, materials and supplies that the helpful information in the advertisements of manufacturers in the May 23 issue will be a valuable part of the data in this issue. Manufacturers of locomotives, freight cars, their appliances and materials, shop equipment, track materials, signal equipment, freight handling equipment and other related products, have an important stake in featuring their products in the advertising pages of the May 23 issue.

Railway Age

A Simmons-Boardman Publication

WE'VE BEEN WORKING ON THE RAILROAD

. . . FOR FIFTY YEARS!

Yes, Hyatt Roller Bearings have been on the job for the railroads of America since 1892 . . . the year John Wesley Hyatt, inventor of the roller bearing, founded his original company.

First, Hyatt Bearings served in line shaft boxes in railroad shops. Then in section cars, in freight handling trucks, and in cranes. Today, Hyatts are found wherever anti-friction bearings are used — especially in modern diesel locomotives and passenger car design, where Hyatt Roller Bearing Journal Boxes have achieved such widespread favor.

John Wesley Hyatt intended it that way. For his original incorporation papers read in part:

". . . and the objects for which this company is formed are the making, purchasing and selling of Roller Bearings and other articles for railroad use."

So, in this year of our 50th Anniversary, the greatest tributes to John Wesley Hyatt's foresight back in 1892 are the giant electric freight and passenger locomotives and streamlined trains moving smoothly over the rails on Hyatt Roller Bearings.

And we'll continue to give the railroads this same kind of dependable service during the next 50 years! Hyatt Bearings Division, General Motors Corporation, Harrison, N. J.

THE 50TH YEAR OF

HYATT ROLLER BEARINGS

Published every Saturday by the Simmons-Boardman Publishing Corporation, 1309 Noble Street, Philadelphia, Pa., with editorial and executive offices: 30 Church Street, New York, N. Y., and 105 West Adams Street, Chicago, Ill.

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Single copies, 25 cents each.

H. E. McCandless, Circulation Manager, 30 Church St., New York, N. Y.

Railway Age

With which are incorporated the Railway Review, the Railroad Gazette and the Railway Age-Gazette. Name registered U. S. Patent Office.

Vol. 112 April 25, 1942 No. 17

In This Issue

C. & N. W. Gives "400" Aspect to Its Milwaukee Station . . . . . Page 814

An illustrated article describing the manner in which this road modernized its medieval-style structure at Milwaukee, Wis., converting it into a thoroughly up-to-date facility both inside and out.

Draft Gear Maintenance Looks Up 821

An abstract of a paper by Goodrich Q. Lewis, chief engineer of W. H. Miner, Inc., in which he discusses the greatly improved draft gear conditions which have helped the railroads reduce freight claims and car damage.

Advertise Now to Hold Employee Morale and Public Good Will 823

An interesting article by J. V. Gilmour, of Roche, Williams & Cunnyngham, Inc., setting forth the need for greater effort on the part of the railways if they wish to retain their position after the war, in view of the present expanded programs of their competitors.

EDITORIAL

Freight Car Supply and Traffic in 1929, 1941 and 1942 811

GENERAL ARTICLES

Time to Stop Hand-Picking Traffic 813
C. & N. W. Gives "400" Aspect to Its Milwaukee Station 814
Pullman Suggestion Plan Brings 25,900 New Ideas 818
Redesigned Compressed Air Radiation Unit 820
Draft Gear Maintenance Looks Up, by Goodrich Q. Lewis 821
Pullman Car with 24 Rooms Being Tested 822
Advertise Now to Hold Employee Morale and Public Good Will, by J. V. Gilmour 823

COMMUNICATION 826

NEWS 827

OPERATING REVENUES AND EXPENSES 850

The Railway Age is indexed by the Industrial Arts Index and also by the Engineering Index Service

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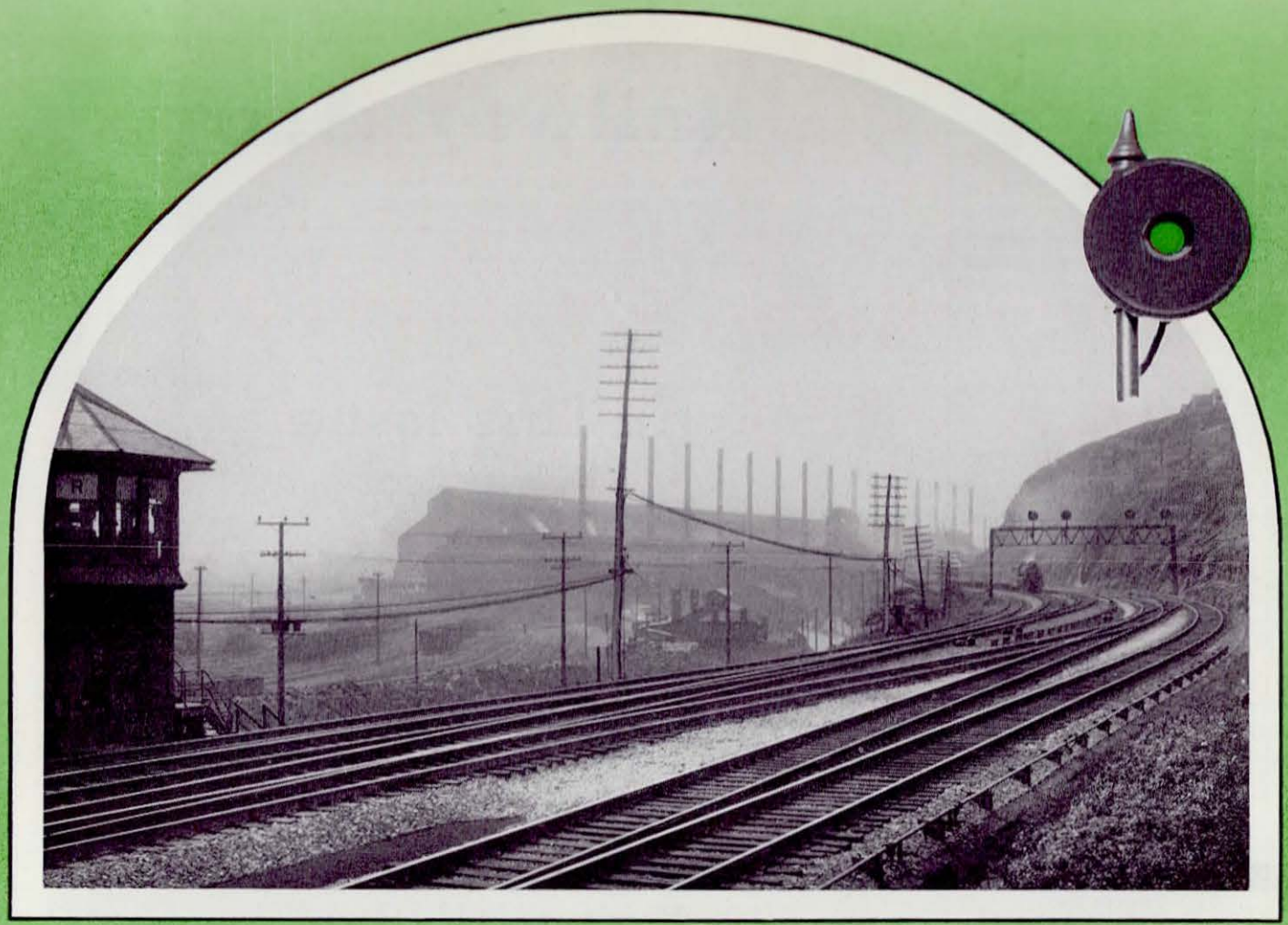


RAILWAY LINES *FEED* PRODUCTION LINES

Only railroads make it feasible to use widely separated factories as a unit production line in the fabrication of our war materials. Signals help the railroads to keep these production lines supplied.

Throughout the country the railroads are pouring thousands of tons of materials into industrial plants and transporting finished products to their destinations. Modern signal systems are playing a vital part in the safeguarding and expediting of train movements so essential to our War Production Program.

We shall be glad to cooperate with you in analyzing improvements in schedules which can be effected through expansion of your signaling facilities.

UNION SWITCH & SIGNAL COMPANY

SWISSVALE, PA.

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

1987

The Week at a Glance

ESTIMATING CAR NEEDS: The government car supply estimators who think the railroads can get along with next to no new cars seem to be doing their figuring purely on a basis of predictable carloadings, and without taking the much longer hauls, which now predominate, into account. Such is the conclusion of the leading editorial herein, which presents figures to substantiate the suspicion. In January of this year carloadings were only 11 per cent above January a year ago, but ton-miles were up 23 per cent, or more than twice as much. The greater efficiency in the use of cars, which both railroads and shippers are striving for, may very well not add substantially to the car supply, as the estimators are counting on it doing, but instead may be largely absorbed by the greater average distance each car is moving.

●

NO BAD ORDER RESERVE: Another consideration which may make the estimates of the government "experts" even more ridiculous than they appear on their face is the fact that the bad order ratio is now near rock bottom. The reserve of extra car supply which was tapped during the past year by reducing the bad order ratio from 6.6 per cent to 3.6 per cent isn't there any more.

●

OUT GOES PIPE DREAM: The crude oil pipe line which a company, half-owned by the Machinists' Union, wants to build from Texas to Savannah, Ga., has failed to get ODT approval. Mr. Eastman appointed a 3-man board to examine the project and he also sought the advice of the War Department. The latter did not believe that the proposal would aid the military effort and the 3-man board said the undertaking was still in the "inchoate" or "prospectus" stage. So Brother Joe turned it down—but, he made it clear, he is still open-minded on other pipeline projects which may look a little more helpful toward harming Hitler and Hiro.

●

"PHOEBE SNOW" RETURNS: Other oldtimers will, like your reporter, be glad to hear that the Lackawanna has brought back to life again that most renowned railroad lady, the spotless "Phoebe Snow." The road naturally isn't, in this day of air-conditioning, going to publicize the advantages of anthracite as locomotive fuel in keeping cinders out of the passengers' hair and soot off their faces. But Phoebe is back anyhow, as a symbol on the road's new box cars, which a picture in our news pages will verify. We welcome the damsel, even if she isn't going to be as ubiquitously insistent on her daintiness as once she was.

●

OIL NEARS 600M BBL.: 586,350 daily bbl. of petroleum products was the average hit by the railroads in the movement to the Atlantic Coast in the April 11 week. These announcements, which report a larger total each week, ought to serve as a good lesson in tongue-control to the Petroleum Co-ordinator (Honest Harold Ickes) who makes them. Remember how he quacked and sputtered and called names last fall at the modest railroad claim that they could handle 200,000 bbl. a week?

●

LOCAL OPTION TIME: Not content with the hour of "daylight saving" they have already got, some communities, particularly in the East, want to gum up the works, and train schedules, by adding another hour this summer. Joe Eastman has written to the governors of New York, Pennsylvania and New Jersey beseeching them not to pile this nuisance upon the plenteous pains transportation already suffers, and he also admonishes them that the states probably lack legal power to take this action anyhow, Congress having entered the field. The principal proponents for turning more darkness into daylight are operators of beach concessions and such-like amusements who foresee greater patronage if people's leisure fills more hours when the sun is there to tingle the epidermis.

●

UNIONS AGGRIEVED AGAIN: Last week it was General Order No. 1, which George Harrison fears might curtail some superfluous jobs, which brought forth loud complaint from the power house across the street from the Capitol. This week their lordships are provoked that there was an ODT session on the railroads' labor requirements at which Labor, with a capital L, was not among the invited guests. Having such a session without Labor, said Mr. Luhrsen in an official bull, "gives the impression that railroads can be run without employees." Mr. Luhrsen is not a railroad employee and neither is Mr. Harrison, and it is a familiar, though deceptive, device whereby an affront to political spokesmen for employees is made to appear as an injury to employees themselves.

●

CO-ORDINATING MADE HARD: You hear a lot of free advice from regulatory statesmen about how railroads ought to become "all-round transportation companies"—but let a railroad try to follow this advice and see where it gets. The latest instance is the Milwaukee, which seeks I. C. C. permission to establish co-ordinated rail-truck service in its territory. An I. C. C. examiner, however, urges the commission to forbid the road thus to extend its service. Instead, he wants to force the carrier to do its "co-ordinating" by handing over the freight it would truck to established truck lines.

●

McNUTT MANPOWER BOSS: The activities of Otto Beyer in the ODT, in seeking methods to assure the railroads of an adequate supply of help, and of the Retirement Board in recruiting men, will all come under the general direction of Paul McNutt in his new job as head of the War Manpower Commission. It is to be hoped, if they come to allocating men the way they have been allocating steel, that there will be somebody on the board who understands transportation better than the benighted WPB does.

BACK TO MONOPOLY?: "Now the ton-mile boys are back in the saddle again"—such was the lamentation when the war broke out in '39 of one of the country's more percipient younger traffic executives. What he meant was that the railroads had begun to learn how to operate successfully as a competitive business; that, after the war was over, they were going to need competitive skill more than they ever did; but that, in the meantime, there was danger that they would let their new-found merchandising ability slip away from them. An able advertising man discusses this same theme in a manner to provoke the thought of the most preoccupied, in an article appearing elsewhere in these pages.

●

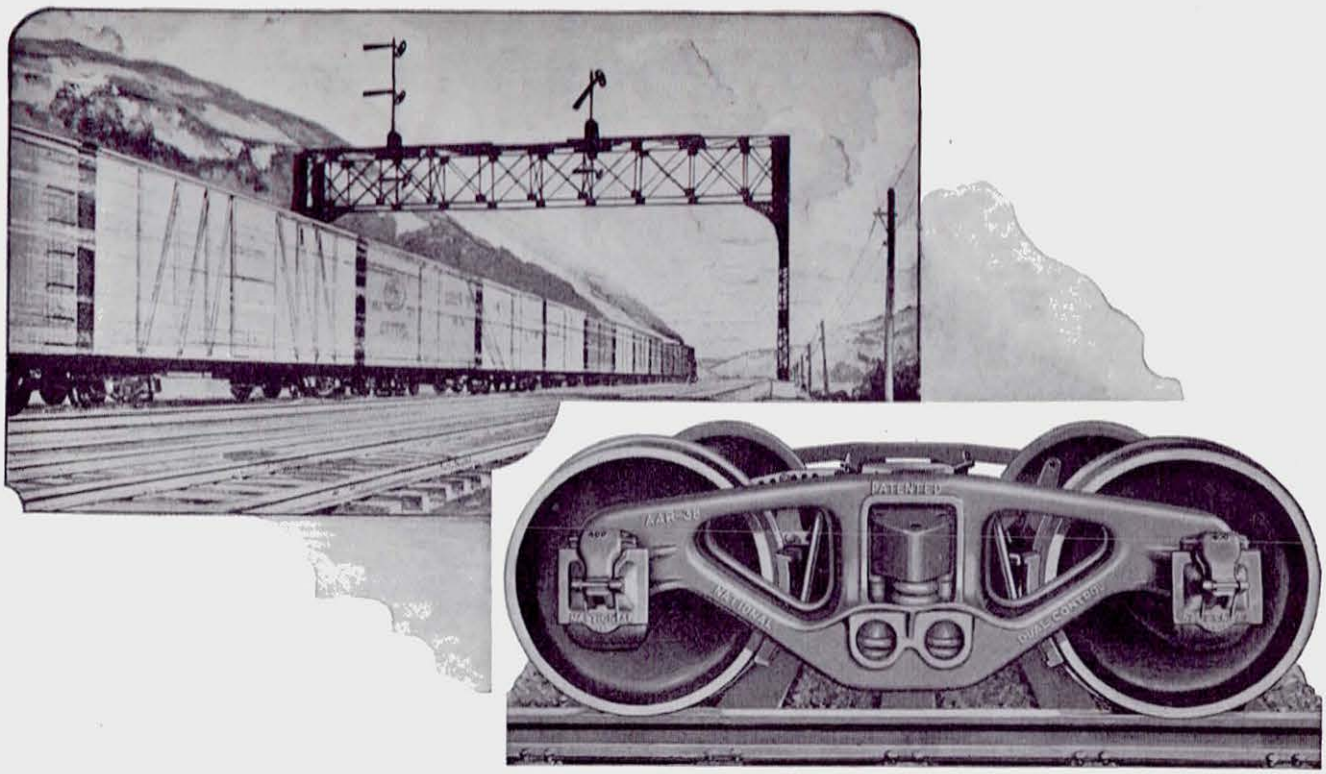
"BARRIER" CAMPAIGN: The "trade barrier" ballyhoo campaign seems to have convinced Mr. Eastman. This is unfortunate, but this conscientious official can't be blamed that he hasn't time to peer deeply and suspiciously into every plausible project which is put before him. As one who knows intimately the story of the "barrier" propaganda project has said, "They can tell an appealing lie, such as 'Balkanizing America,' in two catchy lines, which it takes two forbidding paragraphs to refute."

●

STATION "OUT OF HOLE": The North Western's chateau-type passenger station at Milwaukee was an architectural credit to its proprietor 50 years ago. In recent years it has aroused somewhat less pride—but now the old glory has returned, for reasons which will be clear to you, reader, when you leaf over a few pages to the right. A rejuvenation job has been done—and not too costly either—which preserves the substantial merit of the old structure, while providing trim modernity at the spots where it will soothe and convenience the exacting expectations of a generation conditioned to streamliners. Especially effective has been the adjustment of the station to a street level which, raised 20 years ago, has, ever since, left the building "in a hole." Not an easy discrepancy to ease off, but cleverly and effectively accomplished.

●

DRAFT GEAR ECONOMY: The drastic reductions in the past couple of decades in damage to freight in transit, ascribable to rough handling, didn't just fall into the railroads' lap. A lot of conscientious, continuous plugging by professional specialists—not all in one department—was what halved the breakage. One group who did a lot in this direction was the draft gear folks—on the railroads and off. What the generally-unsatisfactory situation (but with some exceptions) was in 1924, and the changes since introduced, are reviewed elsewhere in these pages in a paper by a noted draft gear engineer. Since the draft gear millennium isn't here yet, it's worth any railroad man's time to find out what causes bad draw bar conditions and the effects thereof—together with well-tried methods for improving them. Rough-riding coupling and buffing mechanisms don't only play hob with lading, but with the equipment itself.



SMOOTHER RIDING and SAFETY at Higher Freight Speeds

ON

NATIONAL B-1 TRUCKS WITH DUAL CONTROL

Spring and friction elements in side frames control vertical oscillations and also strongly resist any inclination of the truck to get out of square.

This resistance to unsquaring prevents horizontal oscillation, and is a necessary safety requirement for high speed freight train operation.

The Type B-1 design also effects important savings in maintenance expenditures, because spring planks are not required—total weight is less—there are fewer separate parts—the life of springs is increased—and wheel changes can be readily made without disassembling any of the major members.

They meet all A. A. R. requirements

NATIONAL MALLEABLE AND STEEL CASTINGS CO.
General Offices: CLEVELAND, OHIO
Sales Offices: New York, Philadelphia, Chicago, St. Louis, San Francisco
Works: Cleveland, Chicago, Indianapolis, Sharon, Pa., Melrose Park, Ill.

Canadian Representatives: Railway and Power Engineering Corporation, Ltd., Toronto and Montreal

Freight Car Supply and Traffic in 1929, 1941 and 1942

Those who are deciding how much materials shall be allocated to the railways and railway equipment and supply manufacturers for maintaining and enlarging railway capacity are, whether they know it or not, thereby deciding whether the war will be carried on as effectively as possible and the needs of the civilian population will be supplied. There are shortages of many materials needed for adequate production for war. But a shortage of transportation would restrict the nation's **total** production, including its production for war—unless production should be so managed that all shortages had to be borne by the civilian population, regardless of its needs. The greatest menace to adequate transportation apparently is that the past and prospective increase in the demand for it is being measured by those allocating materials principally or entirely by past and prospective increases in freight **carloadings.** It cannot be emphasized too often or too strongly that carloadings have ceased to be a measure of the amount of freight service being rendered and demanded.

Car Supply Estimators Overlook Longer Hauls

We have repeatedly emphasized this fact by publishing data showing how much more rapidly ton-miles (tons carried one mile) are increasing than carloadings, because of the increasing distances that freight and, consequently, freight cars must be moved. It is forcibly illustrated again by the ton-mile statistics for January, 1942, just issued by the Interstate Commerce Commission. The number of cars loaded with freight in January, 1941, was 2,740,095 and in January, 1942, was 3,042,706, an increase of only 11 per cent. By contrast, the ton-mileage of revenue freight in January, 1941, was 34,915 million and in January, 1942, was 42,962 million, an increase of 23 per cent. That is, ton-miles increased at a rate more than twice as great as carloadings. Comparison with 1929, when ton-mileage was the largest in history prior to 1941, is equally significant. Carloadings in January, 1929, were 3,571,455 and in January, 1942, only 3,042,706, or only 85 per cent as large. But ton-mileage in January, 1929, was only 35,262 million, while in January, 1942, it was 42,962 million, or 22 per cent larger. Ton-mileage, in proportion to the number of cars loaded, was 43 per cent larger in January, 1942, than in January, 1929.

Comparisons of the performance of and demands upon the railways in 1929 and 1941 are the most significant available for any entire two years. Therefore we present these comparisons in some detail in the table appearing herewith. The figures given for "average number of cars on line" include both railroad-owned and privately-owned freight cars, as both, of course, are used in rendering total railway freight service. They show that in the first quarter of 1941 there were only 74 per cent as many cars on line—or 639,000 fewer—as in the first quarter of 1929. The number increased in the last quarter of 1941 to 77 per cent of the number in the last quarter of 1929; but was still almost 565,000 less. In January, 1942, the number had increased to 80.4 per cent of the number in January, 1929; but was still over 484,000 less.

Ton-Miles Per Car Up 52 Per Cent Since '29

Carloadings increased in 1941 from 77.2 per cent of 1929 carloadings in the first quarter of the year to 85.4 per cent in the last quarter of the year. But meantime ton-mileage increased from 99 per cent of 1929 ton-mileage in the first quarter of the year to 117.3 per cent in the last quarter of the year. Thus, the ratio of the increase in carloadings to the increase in ton-miles rose from 128 per cent in the first quarter to 137 per cent in the last quarter. The figures in the table show how this increase in ton-miles of transportation service rendered was accomplished. The average number of times each freight car was loaded was 4.3 per cent larger in the first quarter of 1941 than in the first quarter of 1929; 4.4 per cent larger in the second quarter; 5.9 per cent larger in the third quarter; and 10½ per cent larger in the fourth quarter. But meantime the increase in ton-miles per car in the first quarter of 1941 over the first quarter of 1929 was 34 per cent; in the second quarter 34.4 per cent; in the third quarter 47.2 per cent; and in the fourth quarter 52 per cent. In the entire year the increase in **ton-miles per car** was relatively **seven times** as great as the increase in the number of times that each car was loaded.

The complete explanation of the remarkable increase

accomplished in **ton-mileage per car** is to be found in the facts that, not only was (1) each freight car loaded 6.3 per cent oftener in 1941 than in 1929, but also that (2) average load per loaded car increased from 26.9 tons to 28.5 tons, or 6 per cent, and (3) the average distance traveled by each car daily increased from 32.3 in 1929 to 40.6 in 1941, or 26 per cent.

How much of an increase in the demand for railway service may reasonably be expected in 1942? In January, 1942, when carloadings were 15 per cent less than in January, 1929, and only 11 per cent more than in January, 1941, the increase in ton-miles over January, 1929, was **51½ per cent** and over January, 1941, was 23 per cent. In February, 1942, the increase in carloadings over 1941 was only 8½ per cent and in March only 3½ per cent; but these figures are highly deceptive because of the large movement of coal in February and March, 1941, especially the latter, in anticipation of the coal mine strike which occurred in April, 1941. The increases in loadings in the first three months of this year over **1940** were January, 19 per cent; February, 26.6 per cent; and March, 26.5 per cent—that is, larger in February and March than in January.

When ton-mileage figures are available for the entire first one-third of 1942 they undoubtedly will show that the increases in the freight service being rendered by the railways and in the demands upon them for service are continuing as they did throughout last year—excepting during the April, 1941, coal strike—and in January of this year. What, then, about the freight car situation? In the first quarter of 1941 the number of railroad-owned cars in bad order averaged 107,202, or 6.6 per cent of the total; in the first quarter of 1942, only 61,657, or 3.6 per cent of the total. This reduction of the number in bad order increased the supply of serviceable cars by 45,545; and there is nothing in experience to indicate that the percentage now in bad order can be further reduced. In spite of this reduction of the number of cars in bad order, the average car surplus reported in the first quarter of 1941 was almost 95,000, while in the first quarter of 1942 it was less than 62,000.

No Additions from Further B. O. Reduction

The increase in ton-mileage in the third quarter over the first quarter of 1941 was 27 per cent. What changes in the car situation occurred between these two quarters? The average number of cars on line was increased 48,602, and the average number of railroad-owned cars in bad order was reduced 28,851. These two changes increased the supply of serviceable cars 77,453. And yet meantime the average car surplus declined about 40,000. These figures indicate that there were required an average of at least 117,500 more active cars to handle the traffic in the third quarter of 1941 than in the first quarter. With the surplus down to an average of less than 62,000 cars in the first quarter of 1942, and the number of bad order cars reduced during this quarter to the apparently irreducible minimum of less than 62,000, or 3.6 per cent, how are the railroads going to be able to meet the demands upon them next summer and fall if there shall be an increase of 27 per cent in ton-mileage in the third quarter over the first quarter of 1942, as occurred last year—or, worse still, an increase of 37 per cent in ton-miles in October, 1942, over January, 1942, as occurred last year? Plainly, the decision of the War Production Board to allocate materials for building **only 18,000 freight cars** in the last eight months of this year forecasts provision of none of the largely increased number of cars that will be required next summer and fall, if, as now seems probable, traffic shall increase relatively as much as it did last year.

The increase in the average haul (per railroad) of revenue freight, from 181.6 miles in October, 1929, to 209.6 (about 15½ per cent) was a resultant of a change in the character of the traffic itself, rather than of managerial ingenuity. But there was nothing "automatic"

Freight Car Supply, Car Loadings and Ton-Miles in 1929, 1941 and 1942

	1929 Avg. No. Cars on Line	1941 Avg. No. Cars on Line	% 1941 of 1929	1929 Car Loadings	1941 Car Loadings	% 1941 of 1929	1929 Revenue Ton-Miles (Millions)	1941 Revenue Ton-Miles (Millions)	% 1941 of 1929	% 1941 Ton-Miles to car loadings compared with 1929 ratio
1st Quar.	2,458,980	1,820,036	74.0	12,153,528	9,382,201	77.2	105,976	105,016	99.0	128
2nd "	2,461,825	1,831,216	74.4	13,463,425	10,464,227	77.7	109,388	109,370	100.0	129
3rd "	2,478,997	1,868,638	75.4	14,303,073	11,417,056	80.0	119,561	132,648	111.0	139
4th "	2,469,732	1,905,192	77.1	12,907,899	11,021,443	85.4	112,279	131,670	117.3	137
Years	2,467,384	1,856,270	75.2	52,827,925	42,284,927	80.0	447,204	478,704	107.0	137

	1929	1942	% 1942 of 1929	1929	1942	% 1942 of 1929	1929	1942	% 1942 of 1929	% 1942 Ton-Miles to car loadings compared with 1929 ratio
January	2,462,448	1,978,018	80.4	3,571,455	3,042,706	85.2	35,262	42,962	121.8	143

	1929 Avg. Loads per Car	1941 Avg. Loads per Car	% 1941 of 1929	1929 Avg. Ton-Miles per Car	1941 Avg. Ton-Miles per Car	% 1941 of 1929
1st Quar.	4.94	5.15	104.3	43,098	57,700	134.0
2nd "	5.47	5.71	104.4	44,434	59,975	134.4
3rd "	5.77	6.11	105.9	48,230	70,986	147.2
4th "	5.23	5.78	110.5	45,462	69,111	152.0
Years	21.41	22.75	106.3	181,224	257,772	142.1

	1929	1942	% 1942 of 1929	1929	1942	% 1942 of 1929
January	1.45	1.54	106.0	14,320	21,725	151.5

in the increase in the average speed of freight trains, or the increase in the average miles moved by each car daily. They resulted from improved locomotives, track, signals and from constantly increasing managerial skill. Faster train movement, and keeping cars on sidings less and in trains more, is the great contribution which railroad management has made and is making to the most efficient possible use of railroad equipment for furthering the war effort.

Longer Hauls Absorb Reduced Detention

Shippers are, of course, also assisting greatly—both by loading and unloading cars with less delay; and by loading them more heavily. Undoubtedly there is a great deal more that can be done in this direction. There remains a question, however, how much reliance can be placed on such efforts to provide an increase in the car supply—because of the increased average distance which cars are now being hauled. Calculations of demand for cars are based on shippers' advance estimates of the number of cars they expect to load. **They do not add a factor to their loadings estimates to give effect to probable average longer hauls.** We apprehend that the increasing length of haul may offset much of the effort which both shippers and carriers are putting forth to load cars more heavily, and to load and discharge them more expeditiously. If this apprehension be well-founded, then those who are looking to efforts of this kind to add to the supply of available freight cars are going to be disappointed.

Events May Prove Absurd Estimates Still More Incompetent

How much consideration did the War Production Board give to the relatively much greater increase in ton-miles than in car loadings that is occurring when it decreed that the railroads would have to get along with only 63,000 new freight cars in 1942? The "experts" of that body obviously are relying on continued increase in efficiency in the use of cars to add to the supply available for meeting increased demands; but the more of such increase in efficiency already has been accomplished, the less of it can be relied upon in future; and if the tendency of ton-miles to increase more than car loadings persists, the absurd estimates of the WPB on the amount of new equipment the railroads will require may turn out to be even more absurd than they at first appeared.

Time to Stop Hand-Picking Traffic

The general manager of the Middle Atlantic States Motor Carrier Conference, Inc., D. T. Waring, writes that we incorrectly quoted a circular of his in our March 21 article "Time to Deal Rationally with Transportation." He complains also that we omitted the last paragraph of this communication to his members. In order that our readers may not be deprived of Mr. Waring's expression in its pure and unalloyed wholeness we quote in full the copy he sent us:

"There has been severe criticism directly from one of the Interstate Commerce Commissioners of failure of common carriers by motor vehicle to fulfil their obligations to the public under their certificates in that they fail, for one excuse or another, to accept and transport shipments deemed to be unprofitable, especially small shipments.

"To what extent there are grounds for this criticism I do not know, but if it is generally true that common carriers are guilty it is a severe indictment of the industry. Your obligation to accept and transport all freight offered within the scope of your operating rights is clear and not only would your failure to do so injure the standing of the industry generally but might result in revocation of your certificate.

"Hundreds of thousands of dollars are being spent annually to build up respect for and remove prejudices against the trucking industry, and practices of the kind referred to will do much to nullify these efforts.

"Our members are strongly urged to fully meet their obligations as common carriers and not subject themselves to criticism of this nature."

It is noted that a copy of the letter of complaint to us was sent to Ted V. Rodgers, president, American Trucking Associations, Inc. It is interesting thus to note that these two gentlemen rely on the Interstate Commerce Commission for news concerning the existence of a practice which the shipping community has observed to be prevalent in the trucking business since the enactment of the Motor Carrier Act, 1935, and before. Your observer should not want to suspect that such a circular as this was issued rather for purposes of the record than to convey new information to its recipients.

Still, would anyone seriously question that common motor carriers quite generally make a practice of "picking and choosing" high-grade freight in quantities, and balancing their loadings in both directions? Do not, in fact, their tariffs contain "stop gaps" that discourage unwanted traffic, and do not their applications for certificates as common carriers make the practice of omitting small intermediate points? Hasn't the I. C. C. some responsibility for the practice mentioned by Mr. Waring in that it approved the minimum rate order which made these "stop gaps" possible?

It seems quite likely that the great loss in revenues which the railroads have sustained in recent years by reason of "picking and choosing" by their competitors curtailed considerably the amount of new equipment they were able to buy during that period—but there is no use of complaining about that now.

But has "picking and choosing" stopped? If not, why not? Why go on burning up precious rubber—and neglect to require the trucks to relinquish their uneconomic services at the same time that the railroads are being required to relinquish theirs?

C. & N. W. Gives "400" Aspect to Its Milwaukee Station

Modernizes medieval-style structure with limestone veneer base course, new entrance and enclosed train concourse, and complete rehabilitation of interior

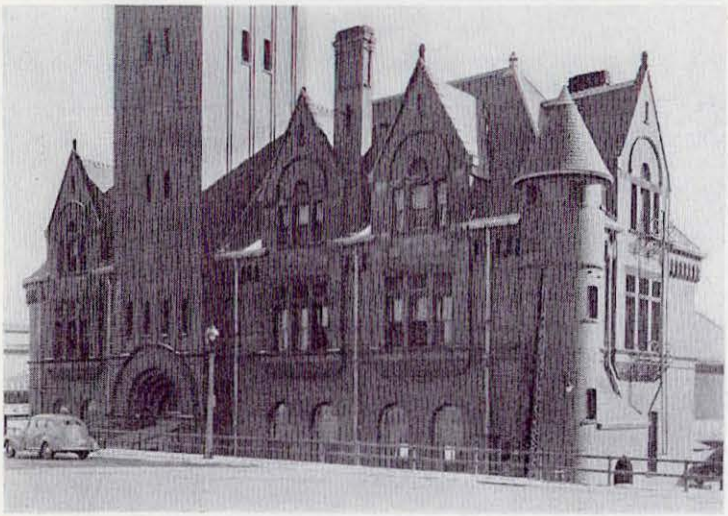
A LITTLE more than 50 years ago, the Chicago & North Western built an architecturally outstanding station at Milwaukee, Wis., in medieval European style, which was looked upon for many years as a thing of beauty, but time, use and changing styles in recent years converted it into an outmoded and inadequate facility in many respects. Today, while the medieval superstructure still stands, and is still a thing of beauty in its own right, an effective modernization project has given it a thoroughly up-to-date aspect at the street level and about its main entrance, and has completely transformed the interior to afford facilities that are not only strikingly modern in detail and restful in appearance, but which also afford largely increased comfort and convenience for patrons.

It is particularly fitting that the Milwaukee station should be modernized since it is one of the principal stops for the road's fleet of streamlined Diesel "400" trains to the Twin Cities and the resort sections of northern Wisconsin and Michigan. That the work has been done effectively is attested by the acclaim of patrons and the local community alike. That the railroad will be benefited is assured not alone in this public acclaim, but also by the fact that for a relatively modest expenditure, its sturdy, well-located and still highly serviceable station has been given a new lease on life.

Located along the waterfront of Lake Michigan, the station, three stories high and 200 ft. long, faces north on Wisconsin avenue; the station tracks, three in number, parallel the east face, which is two stories high and approximately 200 ft. long. The building is of brick construction throughout, faced with a dark red pressed face brick, the front being replete with arched-top windows, peaked gables, circular corner towers, and a massive central tower, 24 ft. square, rising to a height of 120 ft. above a bold, serrated brick arch forming the main entrance.

From the standpoint of the exterior, the most objec-

Left—The Station Was Lifted Out of a "Hole" and Faced at the Street Level With a Pink-Textured Limestone. Below—The Station Prior to the Modernization Work, Showing Its Obscured, Unattractive Entrance



tionable feature of the station lay in a civic improvement carried out about 20 years ago, which raised the level of Wisconsin avenue about 15 ft., placing the lower front face of the building, including the main entrance, below the street level and reached only by a ramp 20 ft. wide, maintained between the building face and the near retaining wall of the raised street. This objectionable feature, plus the need for an enclosed train concourse facing the tracks and general modernization of the interior public facilities to bring them into harmony with the improved passenger train service of the road, were the principal motivating influences behind the station modernization project.

Main Entrance Raised

The first and most important improvement undertaken from the standpoint of the station exterior was to "lift the building out of the hole." This was accomplished by raising the main entrance to the level of Wisconsin avenue, approximately 15 ft., and paving over the former low ramp approach to the station to form a broad sidewalk flanking the station front. The new sidewalk, of reinforced concrete, is supported on reinforced concrete beams, on eight-foot centers, the ends of which were given support in holes cut in the street retaining wall on the one side, and into the brickwork of the building on the other. The beams and walk were poured monolithic, employing ready-mixed concrete.

The construction of the sidewalk at the street level, destroying the existing arched main entrance and cutting abruptly into the high arched-top windows of the first story, called for an entirely new entrance, with an inside stairway leading down to the station level floor. This change gave rise to a plan to modernize the new street-level face of the structure by banding it with a veneer of pink-texture, Kasota dolomitic limestone in block pattern, extending this around on the west end, which is exposed to view from Marshall street across a taxicab drive and terraced station lawn. In conjunction with this new base course, which was carried to a height of 15 ft. above the sidewalk level and capped with a copper cornice, all of the first-story windows along the station front were cut off just above the sidewalk level, were squared up across the top, and were provided with new sash and frames, each with four horizontal muntins. Further accentuating the new modern motif of the base course, the windows were glazed with translucent, horizontally-fluted glass.

Modern Entrance-Way

The necessity for a new high, or street-level, main entrance permitted the substitution of a modern entrance-way, which was taken advantage of to the fullest extent. The feature of the new entrance, which provides two pairs of glass-paneled hinged doors, is an over-hanging marquee, which not only affords protection for arriving and departing passengers, but which also incorporates the means of profuse illumination about the entrance-way at night. This marquee, which is 32 ft. wide and which extends out 16 ft. from the face of the building, is faced on the underside with white enameled sheet metal,

Extreme Left — The Old Main Waiting Room. Left — The Same Room After Modernization. Note Walnut Veneer Wainscot and Changed Positions of the Ticket Office and Newsstand

inset with 60 recessed lights. The outer faces, or edges, about 15 in. deep, are in yellow enameled sheet metal, the front face carrying in large letters the words "Chicago and North Western," and the ends, the single word "Streamliners." This lettering, in green, is illuminated at night by cornice-hidden electric lights directly above.

Immediately inside the new entrance is the new wide stairway leading to the main waiting room, and here patrons gain their first impression of the strikingly modernized aspect of the station interior. In the new entrance vestibule, for example, the walls are faced with horizontal bands of structural glass in sepia and maroon; a highly modernistic handrail divides the stairway; and chandelier and ceiling-type fluorescent lights add color and illumination. The stairs themselves are of steel-plate construction, equipped with reinforced rubber treads.

Several Important Physical Changes

At the foot of the entrance stairs, one entering the station passes a modern restaurant on the left, a colorfully-decorated and furnished women's waiting room on the right, and looks directly south through the length of the main waiting room. This latter room, unaltered in shape or area in the modernization work, is approximately 100 ft. long by 40 ft. wide, with a ceiling height of 25 ft. Here, prior to the remodeling work, a series of five, fully enclosed ticket windows were ranged along the west side of the room, doorways to the train shed were located on the east side of the room, while baggage-handling and men's toilet facilities were located at the south end of the room, on opposite sides of a huge ornamental fireplace. The newsstand was located in the northeast corner of the room. The floor throughout the waiting room was in an attractive pattern of maroon, gray and white ceramic tile, while the walls were of brickwork in buff-colored brick above an eight-foot wood panel wainscot, trimmed with an ornamental terra cotta frieze and surmounted by a beam and coffered ceiling, all in wood.

Fundamentally, the layout of facilities were not bad, and it was evident that even the Victorian aspect of the walls, doors, windows and ticket counter could be overcome, if not completely transformed in appearance, by complete modernization of the wall areas below the frieze line, combined with the cleaning of the brickwork above, the refinishing of the ceiling, the elimination of hanging ceiling lights and the removal of exposed radiators. The most important readjustment of facilities undertaken was the transposing of the ticket counter and newsstand, that is, moving the ticket area to the northeast corner of the room, nearer to the main entrance, and in a more prominent position, and the newsstand to the former position of the ticket office, recessed in the west wall. Other important changes included the transposing of the women's waiting room and restaurant facilities, this change providing the larger area for the waiting room, and the smaller area, and yet of adequate size for the business handled, for the new restaurant. Still another fundamental change in the station facilities, and one which has been received with the most general satisfaction, was the provision of an enclosed train concourse flanking the east wall of the waiting room, in substitution for an open platform area walled off alone by an ornamental iron fence and series of train gates.

Club-Like Interior

The most fundamental change in the redecoration of the waiting room was the provision of an entirely new wall facing around the room to a height of 12 ft., this new facing being in horizontal panels of $^{13}/_{16}$-in., 5-ply walnut-veneered Douglas fir plywood with a rich brown stained and waxed finish. Bordered at the bottom by a black glazed tile base and capped at the top by a trim box cornice, above which rises the original light buff wall brick, steam-cleaned to a new and fresh appearance, the newly faced walls produce a rich, modern club-like atmosphere, blending harmoniously with the subdued colors of the old tile floor and with the woodwork of the beamed and coffered ceiling.

A Section of the Colorfully Decorated, Equipped and Lighted Restaurant

In keeping with the horizontal lines in the new wall facing, which were subdued through the use of walnut joint cover molds, instead of metal, all windows were provided with new sash with horizontal muntins, glazed with horizontally fluted glass. This type of glazing was also carried around new glass-paneled doors leading to the train concourse on the east side, and to a taxicab loading and unloading area on the west side. In addition, the large ornamental fireplace at the south end of the room was removed and the opening was shrouded effectively by a continuation of the walnut wall paneling, obliterating one of the attractions of the station of an earlier day, but entirely out of keeping with modern architectural design. In fact, the only dating feature remaining in the remodeled waiting room is the graceful semi-circular brick arch over the main entrance to the room, a masterpiece in masonry constructed with tapered brick, which remains largely because of the general demand that it be not disturbed.

Open-Counter Ticket Office

In its new location, the ticket office occupies a corner area with a semi-circular, all-metal, open-top ticket counter, 36 ft. long, 42 in. high, and 30 in. across the top. The counter, lying beneath a walnut-faced canopy housing lights which illuminate its top, has four ticket-selling spaces and is fitted on its rear side with cash drawers, shelves and filing spaces for the convenience of the ticket sellers. A back-counter, located four feet behind the front counter, houses all card, inter-line and Pullman tickets and provides safe storage space for special supplies and equipment. Two modern steel desks, an information table and several swivel office chairs, all in

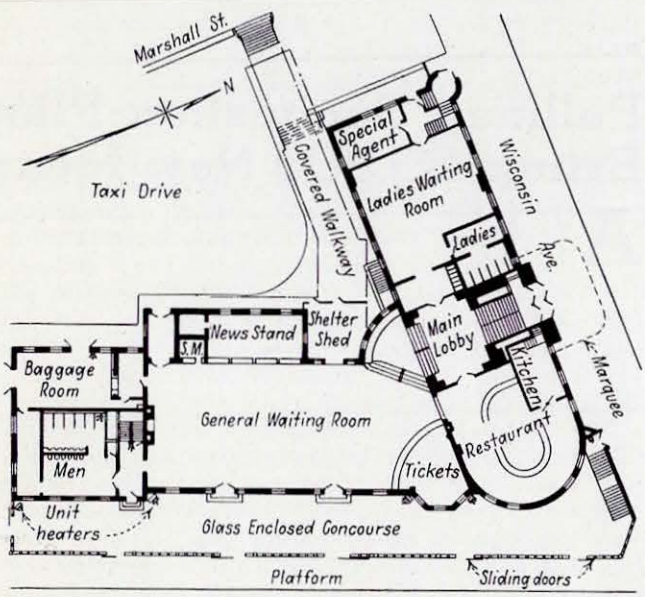
full view of the public, complete the furniture in this space.

The new newsstand has a broad open front along the west wall and is provided with counters, shelves and racks to display periodicals and other merchandise to the best advantage. Furthermore, with light yellow furnishings rising on all sides to a white plaster ceiling, and the whole lighted profusely with ceiling and cove fluorescent lighting, the newsstand area is one of the colorful and inviting spots in the station.

Attractive Restaurant

No less colorful and inviting, however, are the new restaurant and ladies' waiting room. The former, with approach from the lowest landing of the main entrance stairway, is equipped with wide glass-paneled doors and has a wide bay window in the wall facing the waiting room. This area, irregular in shape, with a curved end facing the station tracks, is fitted with four 4-chair tables, seven 2-chair tables and a low curved counter flanked by 34 low, low-backed stools, and is completely equipped with modern steam and servicing tables, grills, coffee-making equipment and refrigeration.

The floor covering of the room is of asphalt tile in mottled brown; the walls, of plaster, are tinted in three-feet bands of varying shades of sepia, fading toward a white ceiling; venetian blinds and blue and yellow cretonne draperies hang at the windows; all chairs and stools have chromium-finished frames and yellow, leather-



Floor Plan of the Milwaukee Station as Modernized

upholstered seats; and the counter and all of the tables are covered with linoleum in royal blue. Adding further to the colorful aspect of the restaurant is a large blue-faced, chromium-trimmed exhaust hood over the back-counter serving area, and an effective arrangement of fluorescent lighting; and adding to the comfort of patrons, at least during the summer months, is an effective system of air conditioning.

Colorful Ladies' Waiting Room

In the ladies' waiting room, directly across the lower stair landing from the restaurant, an area approximately 38 ft. square, the general aspect, brought about by canary

The Provision of This Glass-Enclosed Train Concourse Was One of the Most Effective Features of the Modernization Work

yellow tinted walls, blue door and window trim, and bleached birch tables and chairs with rose and green leathered upholstery, is equally as colorful as that in the restaurant. In addition, this room has a gray and white mosaic tile floor, colorful lighting, and windows equipped with horizontally fluted glass and horizontal muntins.

Directly off from the ladies' waiting room is a newly built-in toilet room and a small powder room, these two rooms occupying an area of approximately 18 ft. by 16 ft. These rooms have the mosaic tile floor and yellow walls of the ladies' waiting room and are equipped with green metal toilet partitions, four pedestal-type wash basins surmounted by a long panel mirror, and a long powder shelf and mirror, conveniently low, and fitted with dressing-table type chairs.

The men's toilet room, at the opposite end of the waiting room from the women's facilities, was enlarged materially in the renovation work, absorbing a former smoking room, and was equipped throughout in accordance with modern standards. This room, now approximately 26 ft. by 20 ft. in area, has a red quarry tile floor, buff-colored walls above a dark green dado, green metal toilet partitions and six pedestal-type wash basins, each equipped with a large circular mirror.

The baggage facilities at the station, formerly exposed to the public to a considerable extent at the south end of the main waiting room, are now provided with a fully-enclosed vestibule, served alone by a broad counter which can be closed off by a sliding window. A feature of the counter is a wide opening beneath it, also subject to closure, which permits the transfer of heavy hand baggage to and from the room without the necessity for raising and lowering it to and from the counter level.

New Enclosed Train Concourse

From the standpoint of the comfort of patrons awaiting incoming trains, possibly the most effective improvement at the station is the provision of a completely enclosed train concourse along the track side, extending out to the edge of the arched, monitor-top type train shed which covers the station tracks. Formerly, a canopy-

covered plank platform, separated from the train shed by means of an ornamental iron fence, was the only protection afforded patrons upon leaving the waiting room, a situation which caused considerable discomfort during the winter months, and especially when cold winds were blowing along the lake front.

Under the new arrangement, a concrete floor replaces the former plank platform, and the entire area, approximately 20 ft. wide and 200 ft. long, is enclosed across its face and ends with steel and wire-glass panels, equipped with five sliding-type train-gate doors. A new, fully-enclosed stairway at the north end of the train concourse affords a ready second entrance to and exit from the station, without using the main waiting room.

To provide the new concourse required the dismantling of the old canopy along the east face of the building and burning off a section of the train shed. The roof provided over the concourse is of light steel frame construction, with a wood deck covered with four-ply built-up roofing. The underside of this roof is faced with insulating panelboard to minimize heat losses and to give a finished ceiling effect.

Ultra-Modern Lighting

Adding to the modern atmosphere about the remodeled station is the improved electric lighting provided throughout, employing fluorescent tube lighting exclusively or to a large extent in the entrance vestibule, the restaurant, the ladies' waiting room and the toilet facilities—and in many instances with attractive, if not unique, effects. In the entrance vestibule, for example, ceiling-type fluorescent fixtures are employed, the tubes lying horizontally along the ceiling beams, in one instance in the form of a cross. In the restaurant, a striking lighting effect is secured by a series of tubes mounted vertically around the top of the curved side wall, the individual tubes, 36 in. long, being spaced approximately 40 in. apart; also by a second series of tubes mounted vertically about the tops of the two columns in the room where they project above the colorfully-finished steam ventilating hood.

In the ladies' waiting room, multiple-tube fixtures about the columns and hung vertically from the walls, including a total of 48 tubes, afford a particularly colorful effect at night, and lines of horizontal tubes over the long mirrors in the ladies' toilet and powder room provide particularly effective illumination of the character desired. In the men's toilet room, lighting is also exclusively by means of fluorescent tubes, these being grouped in ceiling chandeliers and placed singly in a vertical position between the circular mirrors above the wash basins.

In the main waiting room, general illumination is by means of new flush-mounted lighting fixtures in the ceiling, replacing a series of hanging white globes, but this illumination is supplemented effectively by means of fluorescent tube lighting at the ceiling level of the open ticket office, within the newsstand area, and behind silhouetted directional signs mounted along the cornice of the new walnut-veneer wainscot of the side and end walls of the waiting room itself.

Blower-Type Heating

Like the lighting, the heating facilities were completely overhauled in the station work. The old facilities, installed when the station was built, included three 100-hp. boilers of the firebox type, located in the basement, and exposed pipe radiators, including several circular coil-type radiators located throughout the center of the waiting room.

In the heating change-over, the old boilers were replaced with two low-pressure, oil-fired, firebox-type boilers, with oil storage of 18,000 gal. in two steel tanks buried in the ground at the south end of the building. All existing steam piping and radiation were removed and, for the most part, blower-type heating, employing unit heaters, was substituted. In the main waiting room, for example, heat is now supplied by three large unit heaters, one located in the walled-in area above the ticket office and the other two in overhead rooms at the opposite end of the waiting room. Each of these heaters discharges warmed air through grilles located about 20 ft. above the floor, the cooled air being returned to the units through re-circulating intakes located at the floor level.

In the new train concourse, heating is by means of five exposed, blower-type unit heaters mounted near the ceiling, each directing its flow of warmed air downward toward the floor area. Where heating is required in other public areas of the station, such as the ladies' waiting room, concealed convector-type radiators were installed.

The work of modernizing the Milwaukee station, which involved an expenditure of approximately $175,000, was planned and carried out under the direction of B. R. Kulp, chief engineer of the Chicago & North Western, assisted by L. C. Winkelhaus, architectural engineer, and J. A. Andreucetti, electrical engineer. Henry Danischefsky, Milwaukee, was the general contractor, and worked out many of the details with his local architect, Edward Schrang. Otto Kuhler, designing architect, New York, acted as consulting engineer.

Pullman Suggestion Plan Brings 25,900 New Ideas

A TOTAL of 25,900 suggestions for improvements to Pullman service and operations were submitted by employees of the Pullman Company during the first year's operation of the Employees Suggestion System, which was placed in effect on March 1, 1941. Of this number, 2,600 ideas submitted by 1,301 individuals were adopted. Awards amounted to $29,940, with individual amounts ranging from $5 to $375.

The system was established as a means of securing constructive ideas from employees who have had experience with equipment, car operations and service therein, shop methods and accounting details, so that the company can have the benefit of this fund of information and employees can be rewarded for their ingenuity. All employees of the Pullman Company are eligible for awards except general officers and assistants, zone superintendents and assistants, supervisory officers, and others whose work involves research or development of new methods and new ideas.

In order that supervisors who are not eligible for awards shall have a direct interest in the suggestions made by employees coming under their supervision, the results obtained in the various sub-divisions of the company are set up, giving effect to the number of suggestions accepted and the value of those suggestions. An additional amount, based upon a definite percentage of the total money awarded during the year, is divided among the supervisors of the sub-divisions leading in accepted suggestions.

Suggestions are made on forms which the employees may secure from suggestion boxes posted in various offices, yards and shops. The suggestion is mailed by

Calumet Shops Holds First Place with 124.22 Suggestions Adopted per 1,000 Employees So Far in 1942—Award Winners of These Shops, Holding Checks, Are Shown with the Shop Committee

the employee to the Zone Suggestion committee, except at Pullman repair shops where he mails his suggestion to the Shop Suggestion committee. Suggestions are first considered by the Zone or Shop Suggestion committee, after which they are forwarded to Chicago where they are again considered by the General Suggestion committee, which committee consists of 14 officers of the Pullman Company, including Ezra S. Taylor, director of the Employee Suggestion System.

As a liberal policy in the interest of employee relationship, awards are made upon the basis of 10 per cent of the estimated first year's gross savings. This is in contrast to the usual practice of basing awards upon a higher percentage of the net savings, which frequently result in smaller payments.

Employees Enthusiastic

The suggestion system was accepted with enthusiasm by the employees, as was manifested by the submission of 3,500 suggestions during the first month of operation. During the first 15 days, 140 suggestions received the recommendation of zone and shop committees, 41 ideas were approved and cash awards for these ranged from $5 to $100. The suggestions adopted per 1,000 employees so far in 1942 averaged 26.18, while during the 10 months ending December 31, 1941, the average was 91.57.

The mechanical department, including repair shops, led all other classifications in awards during the 12 months, with 937. The others ranked as follows: Yard departments, 702; general offices, 286; district offices, 227; stores department and laundries, 208; miscellaneous, 127; car service employees, 57; and commissary, 22.

Many employees have been "repeaters." A machinist in the iron department of the St. Louis, Mo. shop leads the list with 20 suggestions accepted, for which he received $220. A clerk in the Calumet shop has received $135 for 13 suggestions and an upholsterer, $240 for 7 awards.

The suggestions which have been adopted are varied and have resulted in substantial savings in the operating expenses of the Pullman Company. One outstanding example of constructive thinking was furnished by an upholsterer at the Chicago & North Western yards. He evolved an ingenious tool to be used in the stretching and adjusting of webbing in its application to sofa backs. It is estimated that this suggestion, for which he was awarded $100, will result in a saving of at least $1,000 a year. An electrical repair man in the Southern Pacific yards at Los Angeles won $125 for suggesting a change in the application of air-conditioning drive belts, at a saving of 50 cents per belt. A price clerk in the purchasing department received $75 for suggesting the salvaging of armature shafts by the use of a metallizing process.

An electrical repairman at the Dover Street yard, Boston, received $300 for suggesting that the electrical repair record cards carried in each Pullman car be changed quarterly instead of monthly. The time saved is estimated to amount to about $3,000 annually. A supervisor in the watch department received $225 for the suggestion that the use of a Fan-fold machine for requisitioning material would afford savings in time and expense. A leader in the paint department of the Calumet shops received $215 for suggesting that all trimmings on refinished troop cars be painted in solid colors instead of in bronze. A stenographer and a porter split a $750 award because of submitting the same idea simultaneously. They suggested eliminating vests from porters' uniforms to reduce company expense for free uniforms, lessen the cost to those who pay for their own and conserve wool during the war.

A 76-YEAR OLD LOCOMOTIVE is still in service on the British London Midland & Scottish. Old No. 20002 is probably the oldest tender locomotive (there are older engines of the tank type) in service in Great Britain. The locomotive has two fellows of the same class, but one year her junior, which are also still in service.

Redesigned Compressed Air Radiation Unit

THE grid-sectional locomotive air compressor radiation units, supplied by the Wilson Engineering Corporation, Chicago, and mounted in pairs for parallel flow with variable capacity, either automatic or manually controlled, originally consisted of composite castings with a center of alloy iron upon which was cast the grid fin structure in aluminum. Despite the fact that this class of equipment, when intended for installation on steam, Diesel-electric, or electric locomotives, carries an A-3 priority rating, the necessity for strict allocation of aluminum to direct military uses necessitated substituting other metals and the revised design has been developed and successfully tested.

The new grid section, integrally cast in alloy iron, is said to be the equal, per linear foot, of the original aluminum fin structure in radiation effectiveness. This might seem inconsistent because of the much higher thermal conductivity of aluminum as compared with iron. The deciding factor in this class of radiation effectiveness, however, has been shown not to lie in actual thermal conductivity of the metal, but in the speed with which the heat units are dispersed to the surrounding atmosphere from the surface of the fins.

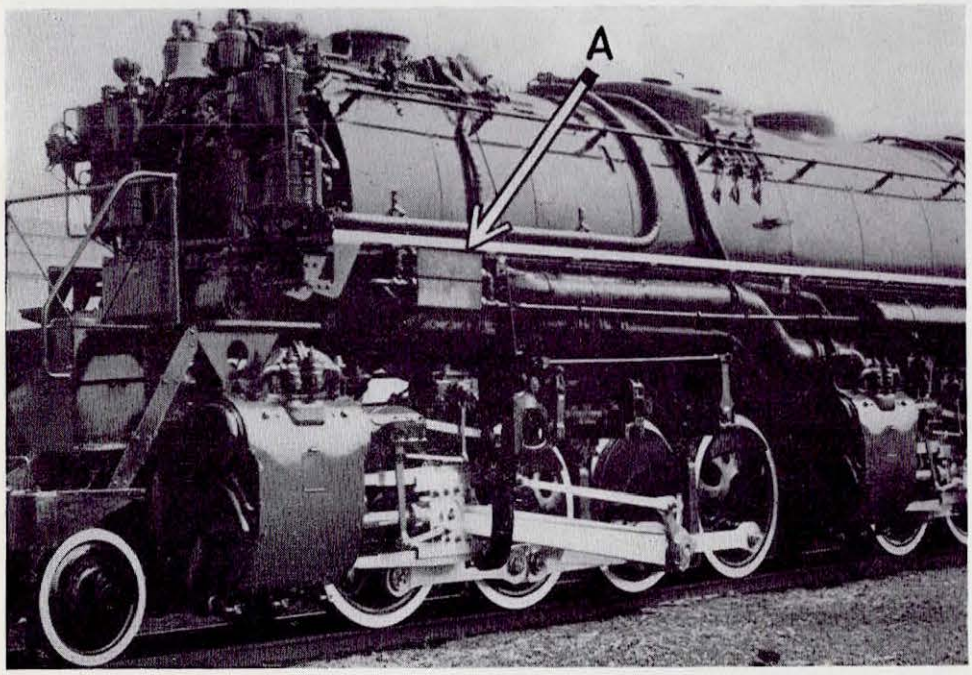
Any strong movement of air about the radiation units cannot be counted upon because locomotives are usually stopped when the air compressors are working hardest.

Comparative thermal conductivity of the metals, therefore, appears to have little to do with the effectiveness of this radiation provided only that the heat units are carried to the surface as fast as they can be carried away, which by comparative tests has proven to be the case with the revised design of Wilson radiation units.

It is recommended that the new radiation units be securely and strongly supported under the running board in steam locomotive applications, one method being shown in the illustration. The assembly of two grid sections in pairs allows an interesting range of variability to meet the wide range of atmospheric temperatures. For instance, the installation shown consists of two banks of two parallel sections each. For manual variability a plug cock is inserted at the air entrance to one of the sections, leaving a free and unobstructed passage through the parallel section. The same end is gained automatically by means of a thermostatic valve. The automatic valve, however, is placed in the discharge end of the section to be cut out, because that valve must be actuated by the temperature of the air after passing through the radiation.

Other advantages of this type of radiation, aside from the variability feature, include its compactness and neatness of application; increased accessibility of motion work and air reservoirs as compared with pipe coils which obstruct; space available for practically any desired amount of additional radiation with this type of radiating unit.

The Wilson radiation units are standard equipment on the new 5400-hp. Diesel-electric freight locomotives and have been installed on steam locomotives by eight trunk lines.



Wilson Variable Air-Compressor Radiation with All-Cast-Iron Grid Sections Mounted in Parallel Under the Locomotive Running Board at *A*

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This Suburban Train of the Chicago, Rock Island & Pacific Has Just Skipped Over the Four Tracks of the Pennsylvania's Main Line at Englewood, Ill.

Draft Gear Maintenance Looks Up*

Greatly improved draft gear conditions help railroads reduce freight claims and car damage

By Goodrich Q. Lewis

Chief Engineer, W. H. Miner, Inc., Chicago

EIGHTEEN years ago the railroads were paying approximately $50,000,000 yearly in settlement of freight claims, most of which sum was for goods damaged during transit. It was estimated that the losses due to expensive repairs and shortened life of car equipment were at least $150,000,000 per year. By 1941, however, freight loss and damage payments had been reduced to $23,439,000 or 53 per cent. In the same period, unlocated damage, usually charged to careless switching, car bounce and draft-gear deficiency, dropped from $16,603,000 to $12,601,000, or 24 per cent, a result particularly significant in view of the 9 per cent increased traffic handled at substantially higher train speeds. Improvement in draft gear maintenance practice has played a very important part in these gratifying results.

Need for Improved Draft-Gear Maintenance Shown

Eighteen years ago, most railroads were fully aware that something drastic would have to be done about the draft-gear maintenance problem. Some railroads had excellent standards. But most of them continued to maintain obsolete types, so that the gear capacity of the average car was very low with little prospect of improvement.

Norfolk & Western car impact tests of 1924 demonstrated that it was entirely practical to shock insulate the lading and structure of fully loaded 50-ton cars up to a speed of six miles per hour by the use of certain high-capacity designs then commercially available but quite heavy and expensive. The enormous advantage in maintaining with gears having the square of six, or 36, smash power units of cushioning value, or 800 per cent more than the then prevailing four-unit standard, was very apparent. Ordinary slow motion photography showed that these high-capacity gears provided complete protection to the lading through a speed range of six miles per hour.

Under identical conditions, however, the lading was badly damaged when gears representing the average and bad standard of 1924 were used. Coincident motion pictures of the coupling operations with the Miner camera, which photographs mechanical action at the rate of 1,000 pictures per second, showed that with the weak gears the line of couplers, gear columns and rear lugs was excessively stressed and that the total crush beyond the solid point was ½ in. The high-capacity gears permitted no crush whatever and developed such low stress in the attachments that the lading in the car was, of course, undisturbed.

This and other investigations about 20 years ago set up for the manufacturers the definite ideal to provide the railroads with a light-weight, less expensive draft gear which could provide a car permanently with a six-mile-per-hour standard of lading and car structure protection.

In 1924, our laboratory research was already under way to produce such a gear, and in 1925 we published and widely circulated a comprehensive analysis of what the draft-gear maintenance problem was and how it could be solved by concerted action which would immediately adopt minimum standards for capacity, endurance and sturdiness. We said that proper yard control plus scientific selection of draft gear would have benefits of great value to the railroads. We summarized these benefits as follows:

1—Radical reduction in annual payment of $50,000,000 for goods damaged in transit.

2—Enormously increased net earning power of car equipment resulting from decreased maintenance expense, less time out of service and longer life of the entire structure.

3—Fewer wrecks, derailments, car failures and other operating delays.

4—Decreased costs resulting from reduced car weights, improved ratio of revenue to total load and longer trains per locomotive.

5—Improved public relations and increased yield from railroad securities.

By 1927 the Association of American Railroads had accelerated their activity in dealing with the draft-gear maintenance problem and in November of that year representatives of 64 railroads and 53 other companies attended the inspection of the facilities of the new A. A. R. draft-gear testing laboratory at Purdue University.

In 1929 the A. A. R. issued a report on the performance in this laboratory of ten of the principal draft gears suitable for application to the standard 24⅝-in. pocket, which was the death sentence for several of the poorer designs and led to preparation of the A. A. R. Specifications for Approved Draft Gears of 1931. Under these specifications six manufacturers now hold certificates covering the twelve gear designs which have been conditionally or fully approved after having been subjected to the standard tests for capacity, endurance, and sturdiness at Purdue University.

Certified Draft Gears Exceed A. A. R. Requirements

The performance requirements of the A. A. R. draft-gear specifications are worthy of detailed study because of the extreme importance of good friction-draft-gear design in relation to safe and efficient freight train operation at present-day speeds and under conditions of the heavier braking ratios. Briefly stated, the certified draft gear must have a new-gear capacity of at least 18,000 ft.-lb. The average new-gear capacity of all the approved types is about 23,000 ft.-lb. so that the total per car is about 46,000 ft.-lb. and 90 per cent of this action is absorbed by friction. Tests of A. A. R. gears after

* Abstract of a paper presented before the April 13 meeting of the Car Foremen's Association of Chicago.

several years of service show that this capacity has the desired permanency. Certified gears do not permit the pressure on the sills to exceed 400,000 lb. until all gears are closed solid. The reason for this is that the draft gears operate in series. The travels add up from car to car so that the smash power of train impacts is eased off through a very long distance and time element. This action is fundamental to the safe operation of freight trains. Lading and car structure in train operation is protected by the joint operation of two draft gears per car and thus has twice the capacity that is available when one car strikes one car, which, although the convenient car impact test condition, is by no means the prevailing yard condition. When two cars strike two cars, 75 per cent of all of the gears are operating instead of only 50 per cent in the test condition. When three cars hit three cars, the utilization is 83⅓ per cent. For four cars, it is 90 per cent, etc.

The research by W. H. Miner, Inc., to provide a better gear than the expensive device which provided the desired standard of lading protection in 1924, was completed six years later. Car impact tests in 1929, using the photographic method of recording, showed that this device, which was the subsequent Miner contribution to the list of A. A. R. approved draft gears, not only met the six-mile-per-hour requirement for complete lading protection in the one car against one car test but had improvements in terms of the metallurgy of heat-treated steel, total elimination of the possibility of gear slack, half as many parts, 16 per cent less pressure on the sills, 125 lb. per car less weight, over 500 per cent more durability and 25 per cent less first cost as compared with the draft gear which represented best practice in 1924.

Ever since January 1, 1934, the Rules of Interchange have made it mandatory that new cars be equipped with certified draft gears. Since January 1, 1935, any new gear being applied to any freight car must be of an approved type unless the pocket dimensions of the car are such that an approved gear cannot be applied. Since August 1, 1937, the same applies to rebuilt cars with the provision that where limitations in underframe construction make it impractical to apply approved gears, non-approved types acceptable to the Committee on Couplers and Draft Gears are permissible.

Real Progress in Reducing Claims and Car Damage

That the American railroads are making real progress with the freight-claim and car-damage situation is evidenced by the A. A. R. report, dated March 26, 1942, which states that the entire cost for freight loss and damage in 1941 was only $23,438,536. The unlocated damage account which is usually chargeable indirectly to rough handling, either because of undetected careless switching, car bounce or draft-gear deficiency, was only $12,601,000 as compared with $16,603,000 in 1923. Last year the railroads handled 475,054,000,000 ton miles as compared with 412,727,000,000 in 1923, so that the cost per million ton miles has dropped in eighteen years from $40.00 to $26.50, or nearly 34 per cent. This improvement is even more impressive when we note that the railroads ran their trains 1½ times as fast in 1942 as in 1923 with the potential smash power hazard 2¼ times as great.

These figures conclusively indicate that the draft gear policy of the A. A. R. is paying handsome dividends. The improvement results primarily from the application of approved gears to all of the 354,000 conventional cars built since 1932 and the fact that the Purdue tests of 1928 radically improved the selection of draft-gear types for the 194,000 cars built in 1929 to 1932, inclusive. The scrapping of several hundred thousand cars and their very bad draft gears has helped. Thus, in the present North American fleet of some 1,900,000 cars there are over 1,300,000 cars which, except those rebuilt with certified gears since August 1, 1937, are the potential candidates for wise draft gear maintenance.

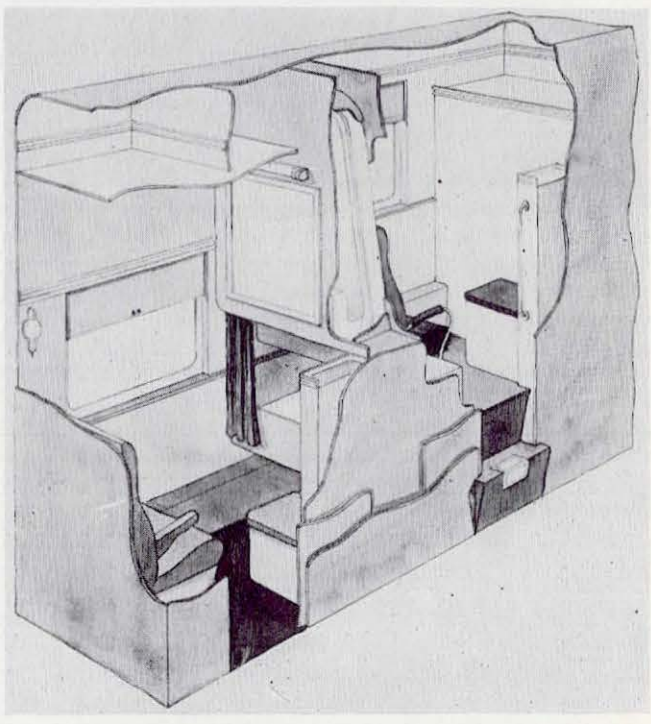
Here is the field where in spite of the good work already done on many cars, the car department officials still have a golden opportunity to promote further the cause of freight claim and car structural damage prevention. Obviously, the wise procedure when in doubt as to what to do with a car having gear in bad condition is to maintain it in accordance with the Rules of Interchange with one of the certified designs. There are excellent draft-gear designs available for most of the cars with non-standard pockets, which conform so closely to the A. A. R. requirements that pocket size is no longer a reason for perpetuating a design which is not giving proper service. The mechanics and economics of the A. A. R. draft-gear policy as embodied in the Rules of Interchange and the Manual of Standard and Recommended Practice are thoroughly sound and progressive. They merit the earnest study and practice of all railroad men.

Pullman Car With 24 Rooms Being Tested

A NEW type duplex sleeping car, designed to produce greater revenue per car, has been developed by the Pullman Company and is now in experimental operation on the "General" of the Pennsylvania between New York and Chicago. This car, which was placed in service on April 10, combines passenger privacy with economy in the price of the accommodation, the rate being 10 per cent above that charged for a lower berth.

By utilizing every cubic foot of interior space, the

(*Continued on page 826*)



A Duplex Roomette Made Up for Day Occupancy

Advertise Now to Hold Employee Morale and Public Good Will

Greater efforts by railways essential to retain position after war, in view of present expanded programs of competitors

By J. V. Gilmour
Roche, Williams & Cunnyngham, Inc., Chicago

IT IS incredible how fast the attitude of an organization toward advertising can change when it enters a seller's market, and this transition comes to a seller of railroad service as rapidly as to a seller of merchandise. Yes, the seller's market is apt to be a danger zone for all who get in it. And let the seller, as well as the buyer, beware.

Prevent Return of "Monopoly Attitude"

The public will be quick to sense any revival of a monopolistic attitude. For years railroad patrons have been somewhat spoiled and for this reason are likely to confuse physical inability to provide the high standard of service they expect with indifference on the part of employees and management. If an occasional failure in service, due to the pressure of war traffic, is aggravated by apathy on the part of management, the railroads stand to lose all their recent gains.

They have made these hard-earned gains through engineering and mechanical improvements that have resulted in more efficient service. They have speeded up freight and passenger schedules, lowered rates and fares, air-conditioned passenger equipment and captured the public fancy with super-speed, streamlined trains having both eye appeal and comfort appeal.

They have encouraged and fostered employee organization of the benefit, social and service type. The voluntary participation of a majority of the employees in the activities of their semi-official groups constitutes the most effective and enduring form of "employee relations."

They have stimulated and educated their sales or soliciting forces. Some of them have done a good job; some have done a mediocre job of telling the public, through advertising, publicity and public relations work, about the advances that have been made.

The railroads came out of World War I in poor condition to face such competition as they had never known before, not only from each other, but from young, lusty entrants in the transportation field. It is to their credit that they were not "knocked out," but withstood the shock of the new competition, weathered the depression years, and entered the period of World War II leaner, harder, physically and mentally more fit than they have been ever before.

Today, everyone is aware that the railroads are handling immense quantities of troops, tanks, planes, guns and supplies essential to the prosecution of the war. Most Americans are aware that they are doing a good job and this impression has been strengthened by the advertising of the American Association of Railroads and the praise that has come from government officials.

Altogether the railroads hold a high place in public esteem. There is nothing that will help retain this enviable position more securely than an intelligent advertising program. Yet, with the traffic mounting and revenues climbing, appropriations have, with certain exceptions, been remaining stationary or declining. This is obviously in reverse to the demands of the situation, as railroad managements will recognize if they take time out to examine this important subject.

There has been no even distribution of traffic in this period of greatly heightened production. So no general pattern can be adopted by the railroads collectively. Each railroad has its own individual job to do and should create its own design for advertising to meet the needs of today and prepare for the post war years.

All railroads, even those whose facilities are taxed to the limit, should advertise to prevent a "letdown" in employee morale and a loss of public good will. There is ample material for copy on the performance of each railroad under the pressure of war. Institutional advertising is bound to effect a better understanding by the public and at the same time let employees know that their company is still soliciting the good will of the public, even when it is impractical to ask for business.

The majority of the railroads, due to their geographical location or through their high degree of preparedness, are still able to serve the public. These railroads should make it known that they want more freight and passenger traffic and should employ advertising for this purpose.

This advertising will offset current rumors that all the railroads are loaded to capacity, that "bottlenecks" exist, and that freight and passenger traffic will soon be rationed. These stories have likely come from a very few shippers or receivers who have had shipments delayed. Though these "failures" are rare, they multiply in the telling and gain circulation via the "grapevine," or through "business letter services" that thrive on rumor, and, of course, through whispering campaigns instigated by rival transportation agencies.

The same is true of passenger traffic. An individual fails to get a seat on boarding a train or cannot, on his first call, get a "lower, middle of car," and the stories circulate that the railroads are "jammed."

To correct this impression and endeavor to increase traffic, if more business can be accommodated without interfering with the movement of war supplies or troops, is certainly not unpatriotic. Surely the sale of rail transportation to the public is not something to be "bootlegged." Indeed no! It is the legitimate product of organizations that are doing their full share in the emer-

gency. If a surplus of service exists over the war demand, this surplus should be offered to the public.

One of the chief criticisms offered by the Federal Co-ordinator of Transportation in his Passenger Traffic Report of 1935 was the wastefulness of hauling half-filled coaches. Surely today there could be no criticism of a railroad that strives to fill its passenger trains and carry the maximum freight load through telling the public that accommodations are available for them.

Every dollar taken in now by the X Y and Z railroad is going to be insurance against its defeat in the post war battle for existence. Whether this dollar stays in the treasury, whether it goes into the improvement or maintenance of track, or whether it purchases new equipment, it is going to play an important part in the peace-time existence of the X Y and Z railroad, in the not so far off years to come.

So it would seem to be sound policy and good business for all the railroads to advertise at this time. They have an interesting story to tell about the part they are playing in the emergency, a story that can be tied in with one of the normal activities of a railroad in the communities it serves. If this advertising gives the local people a better understanding of what the railroad means to them and to the nation, it has accomplished something of inestimable value. Building better public relations is a job that the railroads can not overdo. Though an intangible, it is something they can draw on in the future.

What the Railroads Have That Can Be Advertised

Those railroads, in a position to solicit more business, should employ sales advertising for this purpose, in addition to institutional or public relations advertising. In fact the two branches of advertising might well be combined in many instances as there will be several fronts to cover in order to accomplish the following:

1. Sell each railroad as a service institution that is doing an indispensable job for the United States and will continue to do so in the days when everyone is trying to win peace.
2. Get as much business as each railroad can reasonably handle.
3. Sustain the morale of all employees.
4. Maintain the aggressiveness of the traffic department employees and let them know the public knows that it is still the policy of their company to sell.
5. Substitute for the direct solicitation of traffic agents who may be acting in a service rather than a selling capacity.
6. Inform a section of the public, that has never shipped or traveled by train, of the services offered. According to reports, even after taxes, there will remain an estimated $20,000,000,000 of national income that can "run loose" in 1942. Much of this will be in the hands of people who have never been patrons of the railroads. Not being able to buy automobiles, tires, sporting goods, cameras and the so-called comfort goods or household utilities, a good share of this money should be spent on amusement and recreation, which includes travel.
7. Divert business from overcrowded passenger trains to other, perhaps less convenient ones, that have been carrying light loads.
8. Extend a helping hand to resort owners by promoting resort areas along the line that will be more dependent on train travel than they have been for years. Government spokesmen have recommended vacation trips as a means of relaxation and diversion.
9. Explain, if necessary, the reason for any impairments in the service due to the demands of the war program.
10. Keep the name of each railroad constantly before the public.

If advertising can help do these various jobs, the money spent on it is soundly invested. In fact, a maximum appropriation for most railroads would not call for an expenditure in excess of a small fraction of a cent out of each dollar of their gross revenues.

The railroads collectively or even as individual companies have never, to my knowledge, been accused of lavish advertising expenditures. There have been periods when their promotional programs were quite inadequate. During the two years immediately following World War I the expenditures of 24 representative railroads fell as low as one-half of one per cent of passenger revenues and less than two-tenths of one per cent of gross revenues.

The railroads have a wide market. Almost everyone is a customer or a potential customer. Everyone is an indirect customer inasmuch as he is affected by railroad rates and service. As far as I know, there is no consumer market that does not feel compelled to spend for advertising a larger percentage of its gross sales than do the railroads.

While it is a fact that commercial advertisers exploiting the consumer market generally spend more money in relation to sales, it does not necessarily follow that commercial management is any more advertising minded than railroad management. The commercial concern is likely to be influenced by its distributor and dealer organizations which exert continuous pressure for maximum advertising support. In the case of merchandise, such as automobiles and household utilities, the contract between manufacturer and distributor probably calls for co-operative advertising in the distributors territory on the basis of the number of units sold. Then too, if proper national advertising is not carried on, the independent distributor or dealer is usually at liberty to drop a poorly advertised line and take on one that gives him more help in his job of selling. The railroad sales organization, comprising its own and "foreign line" agents, is not in a position to exert the same kind of pressure on the "home office" for more intensive advertising.

Freight as Well as Passenger Service Should Be Advertised

Most of the money expended for advertising by the railroads is charged to the passenger account. This is natural as the passenger department is, in a way of speaking, the package goods department whose market is the masses. Following this same kind of reasoning, the freight department is the bulk goods department selling service in larger quantities to shippers, a limited number of whom originate the big proportion of the railroad's tonnage. Stimulating the sale of package goods (passenger service) is beneficial to the sale of the bulk goods (freight service). Because an organization, such as General Foods, creates an acceptance for its fancy package goods it has much less sales resistance in marketing its bulk goods. I introduce this analogy because so many railroad executives are inclined to look upon the cost of advertising, other than public relations, as purely a passenger traffic department burden.

There are certain things that advertising cannot accomplish. It cannot for long support anything that is uneconomic, and it cannot economically sell anything that is passé and has lost its appeal to potential buyers. As a consequence, increased advertising was unable to stem the diversion of passenger traffic from the rails to the

highways during the late twenties. A new basis of pricing, the installation of air-conditioning in coaches, the introduction, with the proper advertising fanfare, of new streamlined models with eye appeal and the inauguration of faster schedules did meet, and insofar as it was possible, overcome the competition of the automobile. Thus a change in the price and the character of the product not only checked a trend but regained a substantial share of a market. Now, due to the car and tire shortage, the transportation picture is undergoing another radical change.

Other Transportation Agencies Making Most of Present Situation

Temporarily, at least, a great section of the population is going to depend more and more on the railroads for their transportation. While carrying on its vital job in the war program, each railroad wants to get as large a share of this traffic, both passenger and freight, as it can reasonably handle. Advertising is the quickest and most economical way to inform and cultivate this new market because it can be controlled almost from day to day and its selling force diminished or entirely stopped, or it can be turned to some "non-selling" purpose, such as creating a favorable friendly opinion.

Some of the younger transportation agencies evidently intend to make the most of the present situation. The airlines are already limited in the sale of space through government priorities. Following the announcement of this priority ruling by the government, several of the leading airlines published page advertisements in metropolitan newspapers stating that they still wanted all of the public's business that they could handle and giving assurance that, in spite of the government rationing, there would be little inconvenience to their patrons. Since then, they have carried on their advertising, making no reference to any difficulties they may be having, obviously with the worthy intention of selling every seat on every plane. The airlines always have been strong believers in printer's ink. Their expenditures for advertising run from six to ten per cent of their gross revenues and their setup for publicity and promotional work is comparatively much more extensive than that of the rail lines.

The bus lines seem to be embarking on an aggressive campaign. They are making a determined bid for the business in their normal market, as well as for the business of the soldiers on furlough and the ex-motorist. Foreseeing a period of good business ahead, they obviously intend to make the most of it, although confronted with a problem in the replacements of coaches and tires.

In 1942 all the transportation agencies face a critical period; a time of flux and transition. What they do now will have a strong bearing on what they can do in post war years.

Those who can build up a financial reserve, who can improve and modernize their plant and equipment, who can hold the good will of the public, who can retain a high morale among employees, are going to be in a strategic position to cope with the days of readjustment that lie somewhere ahead.

Perhaps these post war days will not be as black for the railroads as the alarmists have painted them. It is my opinion that it will be many years before any great volume of heavy goods will move by air, although air express service is here today and is destined to develop rapidly.

Get Ready for the Competition to Come

The competition from motorized vehicles will undoubtedly be keener than ever before. Tens of thousands of trucks will, in all likelihood, be sold by the government and take to the highways to engage in some kind of hauling. Hundreds of thousands of new passenger automobiles will leave the assembly line and tires and gasoline will be procurable by anybody with the price in his pocket. All America will be on the highways again.

What a battle there will be for cargoes by the truckers. Unless our entire social and economic system undergoes a radical change, what a battle there will be for John Q. Public's dollar between the motor industry and all the other manufacturers and sellers of luxuries and comfort goods that have long been denied the public.

This is the great struggle that the railroads must be physically fit and mentally prepared to enter after the close of the war. In entering it they will have the advantage of having possession of a large part of the nation's traffic. Possession is a vital point. They should enjoy the advantage of having a loyal and skilled personnel. Trained man power is a priceless

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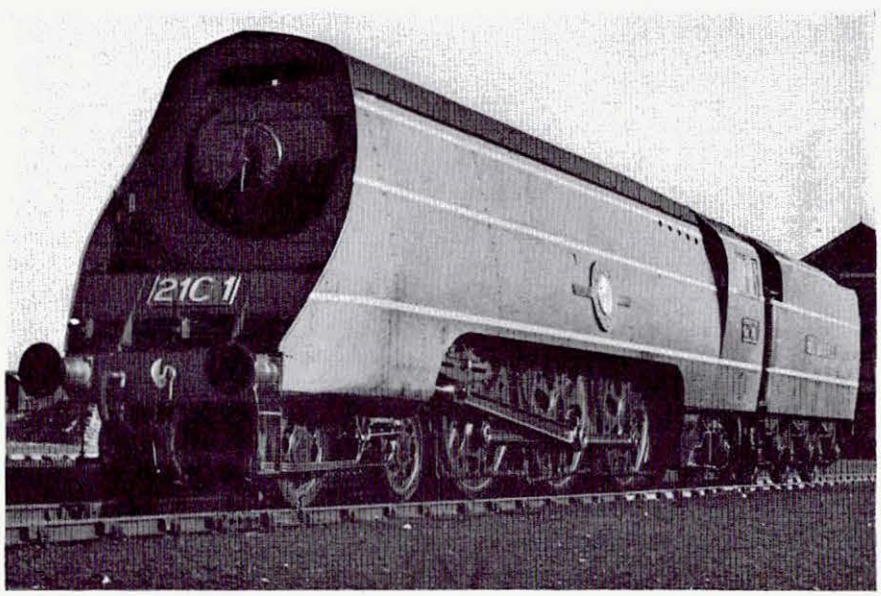
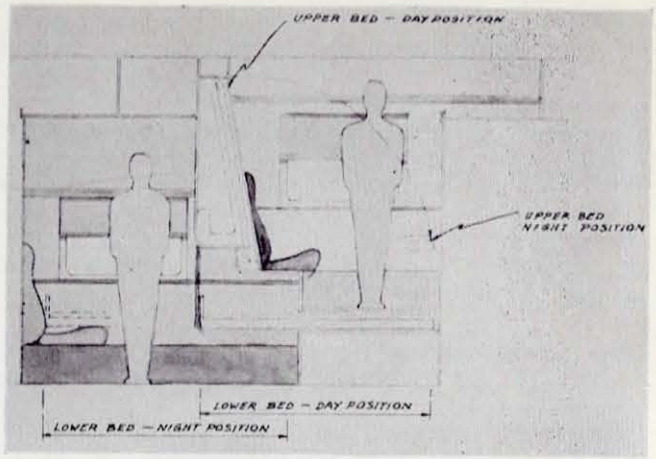


The "Channel Packet" of the Southern Railway of England

This is the first of several "Merchant Navy" class streamline locomotives being built for the Southern Railway for both freight and passenger service. Each locomotive is named for a British shipping line, with the house flag of which it is decorated. The locomotives are of the three-cylinder, single-expansion type, with 72-in. driving wheels. They have a boiler pressure of 280 lb. per sq. in., and develop a tractive force of 37,500 lb. Innovations include electric lighting, double-disc cast-steel wheel centers, welded internal and external steel fireboxes, and Bulleid patented valve gear enclosed in an oil-tight casing between the frames. The tenders are filled at the front through covers in the tender cab. The locomotives have power reverse gears and steam-operated fire doors.

asset. They should, if they continue to perform as they have up to this date, enjoy the confidence and favor of the public. Public good will is indispensable. If the railways hold all of these advantages, it will be difficult for any existing transportation agency, no matter how it is amplified, to displace them as the most economic carrier of persons and goods in mass movement. But there is something else to be considered: the bitter fight for business between competitive rail lines. It is up to the individual road to consolidate its position now, to build for the future by creating good will through suitable advertising and intelligent public relations programs. Those that are in a position to do so should continue the merchandising of its passenger and freight services. Here too, possession is a potent weapon, and victory will go to the ready and the strong.

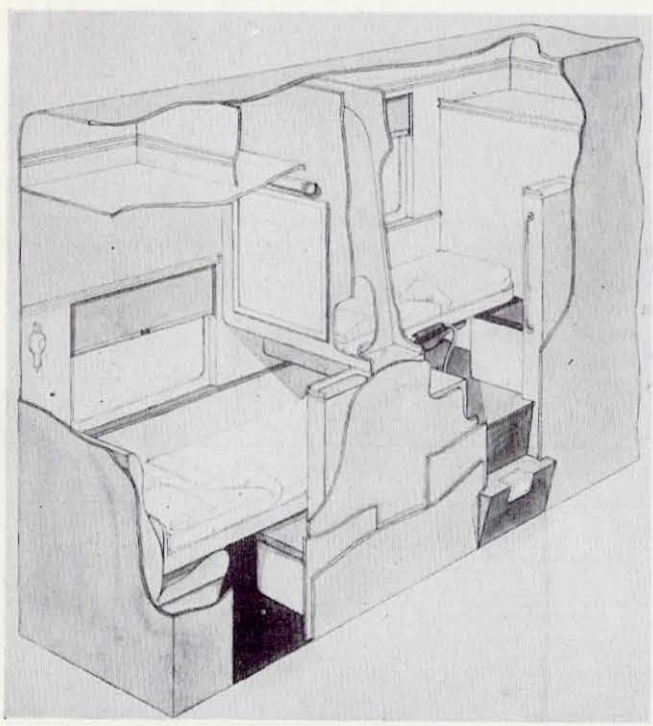


Pullman Car With 24 Rooms Being Tested

(*Continued from page 822*)

new car houses 24 roomettes on two levels, as compared with 18 accommodations in the single-level roomette cars now in operation. Each alternate room is set on an elevated floor level, permitting it to dovetail with its neighboring rooms without sacrifice of the space needed for comfort.

The upper roomette is only two feet above the floor level, and is entered by a single step facing the center aisle. Rooms of both levels have practically the same dimensions. The upstairs bed is folded into the wall, while downstairs the bed is rolled into the wall and kept under the step leading to the upstairs room. Beds are made up prior to the train's departure, so that passengers can undress and then pull out the bed when ready to retire without assistance from the porter. The bed in each room is 6 ft. 5 in. long and 32 in. wide, the same dimensions as in standard roomette cars.



The Duplex Roomette Made Up for Night Occupancy

Each roomette has a folding wash stand, toilet facilities, individual heat and air-conditioning controls, ample baggage space, electric shaving outlet, cold water container with paper cup dispenser, and other standard equipment. From the exterior of the car, the only distinguishing feature is the spacing of the large windows for the two room levels.

With production of Pullmans held up by wartime priorities, this experimental duplex roomette car will for the present be the only one of its kind. Pullman plans to try it out in an experimental way on various railroads over the country, to gage the reaction of travelers to this type of accommodation for various kinds of trips.

Communication . . .

Utilize Passenger Equipment More Intensively

PITTSFORD, N. Y.

TO THE EDITOR:

It seems to me that it is about time for the railways to be giving thought to the necessity of extending local passenger service in the not too distant future. Within a year—possibly within six months—we shall begin to feel the lack of automobile tires most acutely, and there will be steadily increasing demands upon the railroads for passenger service. The demands will come not only for more trains upon branch and even main stems—which have already decreased trains but are maintaining a semblance of passenger service—but for the restoration of passenger trains on lines which have long since abandoned them in their entirety.

The point will be raised that there are no cars available for this purpose. To an extent already astonishing, a great many cars and trains make runs and then lay idle at terminal points for hours awaiting their return. A sharp and constant attention to the better intensive use of passenger equipment probably could add many trains to our schedules without the necessity of buying or building a single passenger coach or locomotive.

Up to the present time, the railroaders seem to have taken the opposite view of this picture. They still are seeking to reduce passenger service at a time when it is more vitally needed than ever, and when, at last, it will bring good revenue to the coffers. How much wiser it would be if the roads, themselves, anticipated the situation and voluntarily prepared to give this additional service, before they are forced into it. Probably, it would be the most valuable public relations job that they ever entered upon. Its repercussions would react magnificently to the roads themselves.

EDWARD HUNGERFORD.

NEWS

Seeks to Thwart Milw. Truck Plan

Examiner would leave road to arrange tie-up with competing motor lines

Examiner C. J. Peterson has recommended in a proposed report that the Interstate Commerce Commission deny the application of the Chicago, Milwaukee, St. Paul & Pacific for a certificate authorizing coordinated common-carrier trucking operations over seven routes between points in Michigan and Wisconsin. Taking the opposite tack from that followed by the commission in the Louisville & Nashville case, embraced in the report on oral argument and reconsideration in Kansas City Southern Transport Company, Inc., Common Carrier Application, 28 M. C. C. 5, the examiner would leave the Milwaukee to arrange for its coordinated services through tie-ups with competing trucking companies.

In the L. & N. case, reported in the *Railway Age* of March 22, 1941, page 531, the commission rejected contentions of protesting motor carriers, and authorized the L. & N. to install its own highway operations. Examiner Peterson quotes at length from that decision, but he asserts that "the facts in the instant proceeding differ in many respects."

"In that case," he goes on, "it was clearly shown that the rail service was inadequate, whereas in the instant proceeding most of the shipper witnesses, including many who appeared in support of the application, testified that the present rail service is adequate. In the original report of the case cited, Division 5 said that protesting motor carriers would find it difficult to adjust their schedules to meet service to the off-rail points. The record in the instant proceeding indicates that coordinated rail and motor service by the Milwaukee and some or all of the protestant motor carriers would not have such effect on off-rail points in the territory here considered."

With respect to the attitude of the Milwaukee, the report cites the testimony of one witness for the road who stated that "while it does not desire to enter into joint-rate agreements with motor common carriers, it would not refuse to do so should the commission so order 'and it was proper'." In the latter connection the examiner notes that the commission has no authority to compel joint-rate arrangements between railroads and motor carriers, but he also mentions protestants' suggestion that "there is no prohibition against it finding that available services fill the public need and expressing its views with respect to the attitude of the Milwaukee and finding that the problem confronting that carrier can be met by using the existing facilities of protestant motor carriers."

Also, the proposed report reminds the Milwaukee that it signed the consent decree of July 18, 1941, in the action brought by the Department of Justice's Antitrust Division against the Association of American Railroads' policy respecting joint arrangements between railroads and truckers. As a signatory, the road "impliedly agreed to exercise its discretion in such matters instead of illegally combining and agreeing to prevent the establishment of coordinated service."

As the examiner appraised the record, the Milwaukee's "greatest fear" over the prospect of entering arrangements with independent truckers is that such a set-up "would result in advantages only to the motor carriers." Mr. Peterson thinks that "there is no good basis for such fear." To him, "the record is convincing" that such arrangements would be "beneficial" to all concerned; for "it seems clear that if the Milwaukee enters into coordinated arrangements with experienced and reliable motor common carriers in this territory and the divisions of revenue are equitable, they will strive to have such arrangements continued indefinitely and will do nothing which will jeopardize them."

ODT Appointment

Robert O. Crowe, former executive vice-president of the Los Angeles Railway Corporation, has been appointed an assistant director of the Office of Defense Transportation's Division of Local Transport. Mr. Crowe will be in charge of the Pacific Coast Region with headquarters in San Francisco, Calif.

Service Order Amended

The Interstate Commerce Commission has issued Amendment No. 3 to Service Order No. 70, which suspends rules and charges governing the diversion or reconsignment of fruits and vegetables in refrigerator cars, insofar as they authorize or permit diversions or reconsignments in excess of three, plus one additional change in consignee or place of unloading at destination. The present amendment adds a proviso to the effect that one change in the name of the consignor or consignee at destination without additional movement of the car shall not be counted as diversions or reconsignments.

A previous amendment had stipulated that changes while en route of the name of the consignee or consignor which do not involve changes either in the route or destination are likewise not to be counted.

Eastman Knocks "Trade Barriers"

ODT head urges early enactment of a law to circumvent state statutes

Joseph B. Eastman, director of the Office of Defense Transportation, has informed Congress that the laws of some states governing highway traffic are slowing up the movement of vital military supplies, and he has further urged legislation "at the earliest practicable time" to break these so-called "bottlenecks." Mr. Eastman's views were given in a letter to House Majority Leader McCormack, Democrat of Massachusetts, after the latter had inquired as to the extent to which such state laws and regulations were impeding interstate truck transportation of war materials.

At the same time, emergency legislation, under which President Roosevelt would be authorized to suspend any state law that blocks the movement of interstate motor traffic, has been proposed in a letter from J. Ninian Beall, general counsel of the American Trucking Associations, to Mr. Eastman.

Mr. Beall recommended that the emergency power be written into S. 2015, the bill introduced by Senator Wheeler, Democrat of Montana, which would authorize the Interstate Commerce Commission, on complaint and after a hearing, to prescribe motor truck size and weight limits in place of individual state restrictions. Extended hearings have been held on the Wheeler bill, but no report on it from the sub-committee to which it was referred has been forthcoming.

Mr. Eastman declared that "the matter is of such seriousness that federal action should be taken at the earliest practicable time" and suggested consideration of a measure already introduced by Senator Andrews, Democrat of Florida. The Andrews bill, which was offered in the Senate and rejected as an amendment to the Second War Powers bill, would have given the President the power to remove or alter state restrictions pursuant to stated standards.

"I am satisfied," wrote Mr. Eastman, "that there is actual, continuous, and substantial interference with interstate movements of vital war materials and supplies in many states of the Union. Complaints of such instances are made to this office almost every day, some of them disclosing quite serious situations. I am informed by officials of the Division of Motor Transport of this office, of the Bureau of Motor Carriers of the Interstate Commerce Commis-

sion, of the Army and Navy, and of the Committee on "Trade Barriers" of the Department of Commerce, that their files are replete with instances of such obstructions to urgent and important movements of war materials, and of their general inability to obtain any satisfactory amelioration of the situation.

"I think it should be said that many of the states have made a sincere effort to be helpful in permitting the free flow of vital traffic by motor vehicle, notwithstanding existing state restrictions. In many others, however, there is no apparent disposition to depart from the peace-time policy of strict enforcement or to remove existing hampering regulations in time of war."

Norfolk Southern Gets Truck Routes

The Interstate Commerce Commission, Division 5, has granted to the Norfolk Southern Bus Corporation, subsidiary of the Norfolk Southern, a certificate authorizing common-carrier trucking operations between Norfolk, Va., and Knotts Island, N. C., and between Washington, N. C., and Belhaven.

Chartering of Vessels to the United States

The Interstate Commerce Commission, Division 4, has issued in Ex Parte No. 152 an order which exempts from regulation under Part III of the Interstate Commerce Act the chartering of vessels to the United States government or any agency thereof for use by the government in the transportation of its own property.

Contracts for Temperature Control Services

The Interstate Commerce Commission, Division 3, has issued a second report upon further consideration in Ex Parte No. 137, approving 31 additional railroad and express company contracts covering services for the protection of perishable freight against heat or cold. The previous reports had approved 86 such contracts.

Service Men Get Lounge Room at Newark Station

A lounge for service men in transit will be opened on April 25, on the lower concourse of the Pennsylvania's Newark, N. J., station. The 40 ft. by 14 ft. room provided by the railroad has been fitted up by the local United Service Organization with easy chairs, game tables, books and magazines, and a motion picture machine. Coffee will be served free of charge to men in uniform by a staff of volunteer workers.

Maritime Commission Purchases Used Passenger Coaches

The purchase of 42 passenger cars formerly owned by the New York, Westchester & Boston for the purpose of transporting shipyard workers between Houston, Tex., and the Houston Shipbuilding Company plant has been announced by the United States Maritime Commission.

The commission's action was taken, it was stated, in order to assure transportation facilities for the shipyard workers and because the use of privately owned automobiles will become restricted through the general rubber conservation program. Arrangements have been made with the Public Belt Line Terminal and affiliated railroads to supply both train crews and the motive power for regular daily service.

The announcement also states that a price of $3,650 each will be paid for the cars, all of which are now located in New York.

Alternate Journal-Bearing Design License

The modified design of standard journal bearing, developed by the A. A. R. Mechanical division to conserve copper and tin and described in the *Railway Age* of January 24, included an alternate design with depressed back which is covered by U. S. patent No. 2154916 issued to the Railway Service & Supply Corp., Indianapolis, Ind. In a letter dated April 10, V. R. Hawthorne, executive vice-chairman of the Mechanical division, states that the owner of this patent has agreed to license it to manufacturers of journal bearings so that railroads may use this patented feature on freight-car journal bearings for the duration of the war to conserve the critical materials, copper and tin.

A license form, approved by the A. A. R. law department, has been prepared and may be executed by a bearing manufacturer or any railroad which makes and uses its own freight-car journal bearings. It will not be necessary for a railroad or car owner which buys all of its bearings from a licensed manufacturer to execute this agreement. The nominal royalty requested for the use of this patent during the war period is $1 per year.

I. C. C. Income and Balance Sheet Items for January

The Interstate Commerce Commission on April 17 made public its Bureau of Statistics' latest monthly compilation of selected income and balance sheet items, showing January's net income of the Class I railroads to have been $26,130,371. Later figures for February and the year's first two months, as reported by the Association of American Railroads, were pub-

SELECTED INCOME AND BALANCE-SHEET ITEMS OF CLASS I STEAM RAILWAYS

Compiled from 132 Reports (Form IBS) Representing 136 Steam Railways
(Switching and Terminal Companies Not Included)

Income Items	All Class I Railways — For the month of January 1942	1941
1. Net railway operating income	$68,966,382	$62,017,435
2. Other income	12,552,610	12,399,532
3. Total income	81,518,992	74,416,967
4. Miscellaneous deductions from income	2,487,406	2,432,776
5. Income available for fixed charges	79,031,586	71,984,191
6. Fixed charges:		
6-01. Rent for leased roads and equipment	13,584,399	12,266,506
6-02. Interest deductions[1]	37,119,092	38,643,318
6-03. Other deductions	117,174	120,677
6-04. Total fixed charges	50,820,665	51,030,501
7. Income after fixed charges	28,210,921	20,953,690
8. Contingent charges	2,080,550	1,524,927
9. Net income	26,130,371	19,428,763
10. Depreciation (Way and structures and Equipment)	17,752,692	17,680,964
11. Amortization of Defense Projects	3,861,700	.....
12. Federal income taxes	17,583,294	7,188,738
13. Dividend appropriations:		
13-01. On common stock	2,360,000	4,862,649
13-02. On preferred stock	536,436	536,436
Ratio of income to fixed charges (Item 5 ÷ 6-04)	1.56	1.41

Selected Asset and Liability Items	All Class I Railways — Balance at end of January 1942	1941
20. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	$466,588,286	$559,914,418
21. Cash	$711,275,256	$650,521,071
22. Temporary cash investments	135,679,382	73,318,514
23. Special deposits	202,182,302	96,394,155
24. Loans and bills receivable	1,200,844	1,652,297
25. Traffic and car-service balances—Dr.	29,609,347	28,360,578
26. Net balance receivable from agents and conductors	86,660,053	54,145,071
27. Miscellaneous accounts receivable	217,887,153	134,384,066
28. Materials and supplies	481,475,209	343,120,431
29. Interest and dividends receivable	14,018,438	12,471,771
30. Rents receivable	1,058,366	1,190,677
31. Other current assets	22,225,610	5,709,414
32. Total current assets (items 21 to 31)	1,903,271,960	1,401,268,045
40. Funded debt maturing within 6 months[2]	$110,964,543	$103,731,819
41. Loans and bills payable[3]	57,264,515	81,890,420
42. Traffic and car-service balances—Cr.	56,010,575	46,318,890
43. Audited accounts and wages payable	297,090,697	233,547,400
44. Miscellaneous accounts payable	53,862,872	47,535,871
45. Interest matured unpaid	56,982,231	36,423,975
46. Dividends matured unpaid	5,612,405	4,909,057
47. Unmatured interest accrued	79,389,547	79,097,181
48. Unmatured dividends declared	8,432,331	4,312,816
49. Unmatured rents accrued	17,871,959	18,347,510
50. Accrued tax liability	384,237,429	233,458,413
51. Other current liabilities	53,631,295	37,813,807
52. Total current liabilities (items 41 to 51)	1,070,385,856	823,655,340
53. Analysis of accrued tax liability:		
53-01. U. S. Government taxes	270,935,343	126,094,851
53-02. Other than U. S. Government taxes	113,302,086	107,363,562

[1] Represents accruals, including the amount in default.
[2] Includes payments of principal of long-term debt (other than long-term debt in default) which will become due within six months after close of month of report.
[3] Includes obligations which mature not more than 2 years after date of issue.

NET INCOME OF LARGE STEAM RAILWAYS

(Switching and Terminal Companies Not Included)

Name of railway	Net Income After Depreciation and Amortization of Defense Projects — For the month of January 1942	1941	Net Income Before Depreciation and Amortization of Defense Projects — For the month of January 1942	1941
Alton	$206,475	* $80,647	$229,980	* $57,790
Atchison, Topeka & Santa Fe Ry System[3]	3,400,917	841,240	4,567,950	1,841,410
Atlantic Coast Line	1,617,961	1,776,350	1,944,218	1,964,208
Baltimore & Ohio	470,543	911,874	1,348,516	1,533,780
Boston & Maine	66,823	263,411	208,565	381,987
Central of Georgia[2]	* 115,748	* 94,677	* 39,710	* 23,402
Central of New Jersey[2]	* 174,408	* 271,784	* 58,505	* 161,767
Chesapeake & Ohio	1,764,289	2,244,776	2,547,766	2,958,108
Chicago & Eastern Illinois	193,015	159,030	244,675	210,519
Chicago & North Western[2]	* 839,871	* 685,127	* 410,105	* 281,500
Chicago, Burlington & Quincy	1,334,900	931,451	1,828,558	1,387,360
Chicago Great Western	77,823	38,461	125,031	85,304
Chicago, Milwaukee, St. Paul & Pacific[2]	1,141,170	* 138,233	1,658,784	367,421
Chicago, Rock Island & Pacific[2]	547,595	* 79,408	923,215	282,538
Chicago, St. Paul, Minneapolis & Omaha	* 155,856	* 198,921	* 105,908	* 153,178
Delaware & Hudson	217,831	144,730	374,452	240,378
Delaware, Lackawanna & Western	* 18,461	260,029	190,223	466,232
Denver & Rio Grande Western	121,923	* 256,900	241,401	* 148,928
Duluth, Missabe & Iron Range	* 1,336,078	* 888,003	* 1,212,112	* 814,367
Elgin, Joliet & Eastern	444,569	538,104	669,816	639,159
Erie	753,440	446,037	1,239,437	750,944
Grand Trunk Western	* 102,572	33,015	2,953	130,667
Great Northern	* 56,303	* 1,058,218	687,184	* 703,476
Gulf, Mobile & Ohio	120,024	117,184	196,151	188,090
Illinois Central	573,992	874,412	1,239,270	1,428,686
Lehigh Valley	* 297,485	200,989	* 82,519	370,559
Long Island	* 169,025	* 223,686	* 37,808	* 93,759
Louisville & Nashville	1,027,278	1,186,357	1,617,684	1,563,330
Minneapolis, St. Paul & Saulte Ste. Marie[2]	* 533,214	* 632,007	* 366,988	* 525,458
Missouri-Kansas-Texas	5,071	* 225,798	102,720	* 129,738
Missouri Pacific[2]	568,796	* 125,300	960,028	249,899
New York Central[4]	409,904	2,123,252	2,279,774	3,632,445
New York, Chicago & St. Louis	635,212	594,920	787,054	732,644
New York, New Haven & Hartford[2]	34,765	8,337	384,190	285,940
Norfolk & Western	2,138,843	2,822,746	2,770,906	3,372,600
Northern Pacific	66,649	* 511,156	597,233	* 226,462
Pennsylvania	2,082,930	2,649,170	4,588,636	4,970,075
Pere Marquette	162,969	371,743	373,257	558,609
Pittsburgh & Lake Erie	368,313	398,865	634,663	591,782
Reading	385,999	683,313	784,780	936,279
St. Louis-San Francisco[2]	* 43,324	* 195,685	209,162	56,551
St. Louis, San Francisco & Texas	1,447	* 13,244	1,447	* 13,244
St. Louis Southwestern[2]	318,571	208,156	376,945	262,362
Seaboard Air Line[1]	151,963	* 120,946	361,123	80,798
Southern	1,399,706	800,699	1,880,419	1,096,055
Southern Pacific[5]	3,753,089	1,161,075	4,434,158	1,825,236
Texas & Pacific	249,417	211,306	357,869	316,809
Union Pacific (including leased lines)	2,040,197	607,603	2,822,615	1,277,835
Wabash	276,779	34,288	508,235	215,209
Yazoo & Mississippi Valley	411,442	32,002	457,125	75,932

[1] Report of receiver or receivers.
[2] Report of trustee or trustees.
[3] Includes Atchison, Topeka & Santa Fe, Gulf, Colorado & Santa Fe, and Panhandle & Santa Fe.
[4] Includes Boston & Albany, lessor to New York Central.
[5] Includes Southern Pacific Company, Texas & New Orleans, and leased lines. The report contains the following information: "Figures reported for Southern Pacific Transportation System exclude offsetting debits and credits for interest on funded securities and rentals for leased properties between companies included therein. Operations for January 1942 of separately operated Solely Controlled Affiliated Companies (excluding results for Southern Pacific Railroad Company of Mexico), not included in income results for the System, resulted in a net loss of $121,692. These results include $195,577 representing interest on bonds of such companies owned by Southern Pacific Company not taken into income by S. P. Co. and, therefore, not included in the January 1942 income results for the System. The combined results for January 1942 for Southern Pacific Transportation System and separately operated Solely Controlled Affiliated Companies (excluding S. P. R. R. Co. of Mexico) amounted to a net income of $3,826,974. Figures herein given exclude results of S. P. R. R. Co. of Mexico for the reason that policy was adopted January 1, 1940 of making no further advances to that company, it being required to conduct its operations entirely within its own resources."
* Deficit.

lished in the *Railway Age* of April 4, page 708.

The commission's statement shows that the roads not in receivership or trusteeship had a January net income of $25,006,712 as compared with $22,564,089 in the same month last year.

Ninety-one roads reported net incomes for January, while 38 reported net deficits; in January, 1941, there were 83 net incomes and 46 net deficits. The consolidated statement for all Class I roads and that showing incomes or deficits of "large steam railways" are given in the accompanying tables.

Three Months Export Traffic

Cars of export freight, other than grain or coal, unloaded at Atlantic, Gulf and Pacific ports in the first three months of this year totaled 190,356 compared with 134,812 cars in the same period last year, or an increase of 41 per cent, according to the Association of American Railroads. In the month of March, cars of export freight, other than grain or coal, unloaded at those ports totaled 69,419 compared with 46,729 cars in March, 1941.

Cars of grain for export unloaded in the first quarter of 1942, at Atlantic, Gulf and Pacific ports, totaled 9,623 compared with 8,505 cars in the same period last year or an increase of 13 per cent. In March, this year, 2,708 cars of export grain were unloaded compared with 5,237 cars in the same month last year.

ODT Advisory Committee

Formation of a Traffic Advisory Committee on Industrial Alcohol, Distilled Spirits, and Molasses has been announced by Director Eastman of the Office of Defense Transportation. Dealing with "transportation problems involved in the movement of industrial alcohol and with related problems involved in the movement of molasses and high wines," the committee will act as an advisory body to Samuel W. Fordyce, III, Division of Traffic Movement assistant director in charge of the Section of War Traffic.

The committee consists of eight members under the chairmanship of Ralph R. Luddecke, general traffic manager of the Fleischmann Distilling Corporation, New York.

Transportation of Explosives

The Interstate Commerce Commission last week made public an order in No. 3666, prescribing certain new and amended regulations for the transportation of explosives and other dangerous articles. The order was dated February 26, 1942. At the same time the commission made public an April 7, 1942, order in the Ex Parte No. MC-13 proceeding which relates to regulations governing the transportation of explosives and other dangerous articles by motor vehicle.

New Panama Limited Almost Ready

Cars for the Panama Limited of the Illinois Central, which were frozen under limitation orders L-97 and L-97a issued by the War Production Board on April 4, have now been released and delivered to the railroad. The cars include Pullman sleeping cars and railroad-owned dining cars. Dormitory cars, the completion of which has been delayed awaiting parts, are expected to be completed before the end of the month. The tentative date for inauguration of the train is May 3.

Operating Revenues for March Up 27.4 Per Cent

Preliminary reports from 88 Class I railroads, representing 82.7 per cent of total operating revenues, made public by the Association of American Railroads, show that these carriers, in March, 1942, had estimated operating revenues amounting to $438,551,054, compared with $344,127,773 in the same month of 1941, or an increase of 27.4 per cent.

Freight revenues amounted to $362,735,677 compared with $286,379,155 in March, 1941, or an increase of 26.7 per cent. Passenger revenues in March, 1942, totaled $47,675,711, compared with $32,656,356, in March, 1941, or an increase of 46 per cent.

Fined $6,000 for Elkins Act Violations

Trustees of the New York, New Haven & Hartford were fined a total of $6,000 in the Federal District Court at New Haven, Conn., on April 6, following their pleas of *nolo contendere* to six counts of a twelve-count indictment charging violations of section 1 of the Elkins Act, according to advices received by the Interstate Commerce Commission. The notice from I. C. C. Secretary W. P. Bartel explained that the court imposed a fine of $1,000 on each of the six counts to which the trustees pleaded, while the remaining six counts of the indictment were dismissed.

"It was charged in the indictment," Mr. Bartel went on, "that 'order notify' shipments arriving at Hartford, Conn., and Bloomfield, had been delivered to 'notify' parties prior to the time the original bills of lading were surrendered to the carrier

by the 'notify' parties. Substantial periods of time elapsed between the delivery of the shipments and the surrender of the bills of lading to the carrier. The bills of lading were being held by banks at Hartford at the time the cars were delivered to the 'notify' parties."

The matter was investigated by the commission's Bureau of Inquiry which assisted in the disposition of the case in court.

January Bus Revenues 47.6 Per Cent Above 1941

Class I motor carriers of passengers reported January revenues of $13,863,259, as compared with $9,390,278 in January, 1941, an increase of 47.6 per cent, according to the latest compilation prepared by the Interstate Commerce Commission's Bureau of Statistics from 143 reports representing 147 bus operators. Passengers carried increased 49.1 per cent, from 13,489,405 to 20,107,443.

	Passenger revenue		Passengers carried	
	January 1942	January 1941	January 1942	January 1941
New England Region	$568,941	$374,777	1,566,456	1,040,037
Middle Atlantic Region	1,524,070	1,157,126	3,474,589	2,523,386
Central Region	2,244,601	1,592,736	3,698,945	2,697,711
Southern Region	3,820,671	2,579,232	4,993,676	3,136,713
Northwestern Region	462,408	348,152	397,510	317,809
Mid Western Region	1,168,780	781,302	986,630	657,424
Southwestern Region	2,046,787	1,255,785	2,478,426	1,435,132
Rocky Mountain Region	154,435	91,573	116,975	72,087
Pacific Region	1,872,566	1,209,595	2,394,236	1,609,106

The breakdown by regions of the bus revenue and traffic figures, which exclude data on charter or special party service, is given in the accompanying table.

Director Eastman Rejects Trans-American Pipe Line Request

Joseph B. Eastman, director of defense transportation, has refused a request by the Trans-American Pipe Line Corporation that he certify to the President that a crude oil pipe line which the corporation proposed to build is necessary for national defense.

The corporation in which the International Association of Machinists has a 50 per cent interest had sought to obtain permission to build a pipe line reaching from Texas to the Atlantic coast at Savannah, Ga. The total cost was estimated at between $20,000,000 and $25,000,000, and the promoters expected to obtain a 100 per cent loan from the Defense Plant Corporation, a subsidiary of the Reconstruction Finance Corporation. Mr. Eastman was asked to recommend to the President that he issue a proclamation under the Cole Pipe Line Act declaring that the proposed pipe line "is or may be necessary for national defense purposes."

Mr. Eastman's decision was based on the report of a three-member board which held a public hearing February 19 on the corporation's application, and on a statement of views by the War Department. The board, in recommending against the project, declared that it was in what might be called "an inchoate state or the stage of a prospectus."

Though representatives of both the Army and Navy attended the hearing on the application, neither armed service offered support of the project, Mr. Eastman said. Instead, the War Department wrote him after the hearing, actively opposing its construction, contending that because of its location, it would be of relatively little value to the war program.

In rejecting the application of the corporation, Mr. Eastman declared that he is of the opinion "that additional pipe line facilities which can substantially increase the flow of oil to the Atlantic seaboard area are 'necessary for national defense purposes'."

In describing the drawbacks of the proposed project, Mr. Eastman asserted that "the steel requirements were estimated at about 85,000 net tons. There was no showing that the necessary pipe, pumps, and other materials are available under present conditions. On this point the corporation takes the position that the first question to determine is whether the pipe line is necessary to the national defense. If such finding is made, then it says, 'whether the steel will be allocated by the War Production Board or substitutes used, or whether new Diesel engines or second hand motive power are to be used' are matters thereafter to be determined."

"I shall be glad," Mr. Eastman concluded, "to join any other governmental agencies in an investigation of the necessity for additional pipe line facilities and have designated R. W. Shields, engineer for pipe lines, of the Interstate Commerce Commission, to represent me in any such investigation. It is my opinion that a study of this character must consider the relative merits of all proposed projects, including that of the Trans-American Pipe Line Corporation."

Field Offices of ODT's Division of Motor Transport

Sixteen of the 51 field offices to be established by the Office of Defense Transportation's Division of Motor Transport have now been opened, according to an April 21 announcement from Director Eastman. They are in Indianapolis, Ind., Jacksonville, Fla., New York, Hartford, Conn., Dallas, Texas, Phoenix, Ariz., Atlanta, Ga., Denver, Colo., Portland, Ore., San Francisco, Calif., Boston, Mass., Charleston, S. C., Spokane, Wash., Birmingham, Ala., Little Rock, Ark., and Norfolk, Va.

"In addition to the administration of the various programs undertaken by the Division of Motor Transport," the ODT announcement said, "the field offices will assist the War and Navy departments and other shippers of war materials in making arrangements for motor transport and will assist in coordinating and mobilizing motor vehicle equipment to meet war requirements. Field representatives will clear emergency motor transport movements with state and local authorities, and will maintain liaison with Army and Navy establishments, the Interstate Commerce Commission, and other government agencies."

R. C. C. Distribution

Another liquidating distribution, amounting to $367,405.90 or one-half of one per cent of its fund, will be made on May 15 by the Railroad Credit Corporation, according to an April 17 announcement from President E. G. Buckland.

Of the total distribution, $328,025.58 will be made in cash, and $39,279.32 will be credited on carriers' indebtedness to the Corporation. This will bring the total amount distributed to $63,543,747.73 or 86.5 per cent of the original fund contributed by carriers participating in the Marshalling and Distributing Plan, 1931. Of this amount, $35,322,481.70 will have been returned in cash and $28,222,266.03 in credits.

Emergency I. C. C. Powers Over Motor Carriers

Interstate Commerce Commissioner John L. Rogers, who is also director of the Office of Defense Transportation's Division of Motor Transport, has been designated an additional member of the commission's Division 3 for consideration of matters arising under the Interstate Commerce Act's section 204(e), relating to emergency powers over equipment, service, and facilities of motor carriers. The three regular members of the division are Commissioners Miller, Patterson, and Johnson.

Section 204(e) was part of the recently-enacted Second War Power Act, 1942; it gave the I. C. C. the same emergency powers over motor carriers that it had over railroads.

Mid-Week Travel and Staggered Vacations Urged by Eastman

To prevent week-end traffic congestion, Director Eastman of the Office of Defense Transportation has urged vacationists to do their traveling during the middle of the week. At the same time, Mr. Eastman said that vacations should be staggered throughout the year instead of being concentrated during the summer months.

The appeal came in the form of an April 17 memorandum to all government agencies. In the memorandum Mr. Eastman requested government employees to cooperate along the foregoing lines. "The adoption of staggered vacations throughout the year, and mid-week starting and ending of vacation leaves will enable common carrier facilities to be efficiently utilized," the ODT director said.

Young Elected Chairman of Board of the C. & O.

Robert R. Young, chairman of the Alleghany Corporation, was elected chairman of the board of directors and the finance committee of the Chesapeake & Ohio at a meeting of directors at Richmond, Va. On April 21. The action came immediately after stockholders had named five new directors at their annual meeting to replace members Young once classed as allies of

the Guaranty Trust Company of New York. The board chairmanship had been vacant since the resignation of Herbert Fitzpatrick of Huntington, W. Va., a year ago in an effort to end the dispute between Young and the Guaranty Trust Company. Robert B. Tunstall, counsel for the company, was promoted to vice-president and general counsel by the board of directors. Brooke and all other officers of the company were re-elected. A photograph and biographical sketch of Mr. Tunstall's career appear in the "Railway Officers" columns in this issue.

Railroads and the New Manpower Commission

Those activities of the Office of Defense Transportation which relate to labor supply and requirements and those of the Railroad Retirement Board with respect to employment service will be brought under the jurisdiction of the new War Manpower Commission headed by Paul V. McNutt, Federal Security Administrator, as a result of an executive order issued on April 18 by President Roosevelt. The aforementioned are listed among the agencies which "shall conform to such policies, directives, regulations and standards as the chairman may prescribe in the execution of the powers vested in him by this order, and shall be subject to such other coordination by the chairman as may be necessary to enable the chairman to discharge the responsibilities placed upon him."

The activities of the Railroad Retirement Board have dealt mainly with recruiting replacements for the carriers, while the ODT has been working on the subject of the manpower needs of the railroads in relation to the operation of Selective Service.

Tank Car Movement Near 600,000-Bbl. Mark

Soaring upward once again at a pace which has seen new records established every week, the tank car movement of oil into the east coast area reached the total of 586,350 barrels daily during the week ended April 11, according to an announcement by Petroleum Coordinator Harold L. Ickes. This was an increase of 11½ per cent over the preceding week when the movement averaged 525,697 barrels. Oil shipments by rail from California to the Pacific Northwest also increased during the week by about 12 per cent, Mr. Ickes said.

The seven oil companies participating in the northwest movement, which is relatively new, reported loading a total of 566 cars during the week, compared with 504 cars in the week ended April 4. In terms of oil, this represents an average daily movement of 18,200 barrels for the week of April 11. Figuring the time required for cars to return to California, after unloading, it is estimated that 1,250 cars are engaged now in the Pacific Northwest service.

In moving 586,350 barrels each day into the east, the 20 oil companies reporting loaded a total of 18,243 cars. Including cars which were on the way back west for reloading, this means that about 43,500 tank cars are now engaged in the east coast service, it was pointed out.

At the same time the Office of Petroleum Coordinator announced the obtaining of an A-1-a priority rating on a pipe line project which will make the refineries of the San Francisco Bay area entirely independent of ocean transportation for their crude oil supply early in June.

The project involves conversion from natural gas to crude oil service of the 24- to 26-inch Stanpac pipe line, extending from Kettleman Hills to the Bay region, and the substitution of the Rio Vista gas field as the source of gas supply for communities now served off the Stanpac line.

Meanwhile, Mr. Ickes, in his capacity as Solid Fuels Coordinator, announced that the daily average carload delivery of coal to the New England states dropped to 853 for the week ended April 11, as compared to 968 cars daily average for the previous week. He went on to say that he had been advised by the Association of American Railroads that for the week ended April 11, a total of 5,971 cars of bituminous and anthracite, an equivalent of approximately 298,550 tons, were received at the New England gateways as compared to 6,776 cars, or approximately 338,000 tons, for the week ended April 4.

I. C. C. Refuses to Reconsider Big Truck Merger

The Interstate Commerce Commission has denied petitions of the Department of Justice's Antitrust Division, the Secretary of Agriculture, and others for reconsideration of its recent decision approving the acquisition by Associated Transport, Inc., of eight truck lines operating along the Atlantic seaboard from New England to Florida, and extending also to such points as Pittsburgh, Pa., Cleveland, Ohio, Nashville, Tenn., and New Orleans, La. The commission's decision was reviewed in the *Railway Age* of March 28, page 666.

Among other contentions of the Antitrust Division was one to the effect that there was a "railroad-relationship" angle to the transaction because of the fact that Kuhn, Loeb & Co., which has been banker for the Pennsylvania and Baltimore & Ohio, would obtain an interest in Associated. While the commission had rejected this contention, Associated's reply to the Antitrust Division's petition for reconsideration indicated that Kuhn, Loeb & Co. had withdrawn from participation.

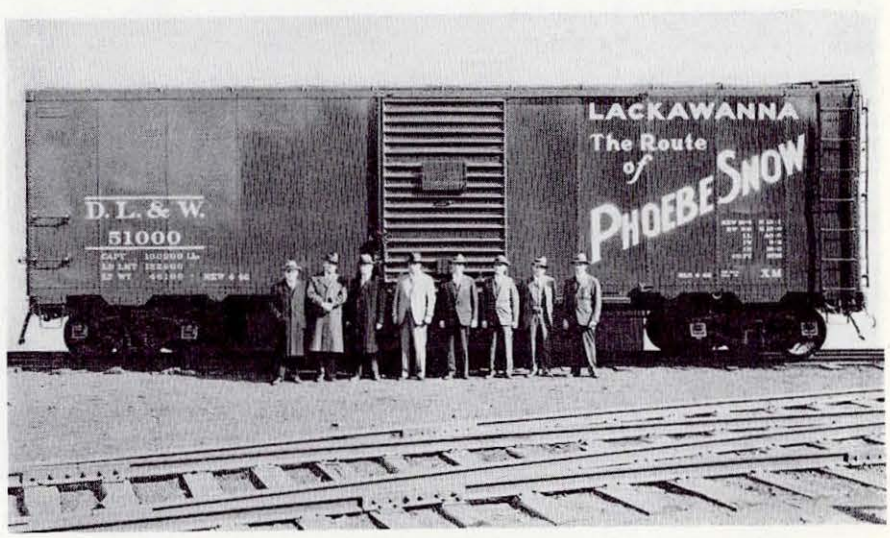
"Phoebe Snow" Theme Revived by Lackawanna

A revival of the "Phoebe Snow" theme, which several years ago featured the Delaware, Lackawanna & Western's advertising campaigns, was given official release through the lettering of "The Route of Phoebe Snow" on the first of 400 new box cars being built for the road by the Magor Car Corporation at its Passaic, N. J., plant. Delivery of the new cars is expected to be completed during May.

Phoebe Snow, "in spotless white, a real delight, upon the Road of Anthracite,"—so read the jingles of yore, was introduced to American travelers in 1903. Lackawanna's advertising in the newspapers and magazines, and in promotional literature, in those days, featured Phoebe Snow as a charming Miss of the era of narrow waistlines and flowing tresses. The allurement was made complete by an expansive hat which topped off the symphony in white. The program was discontinued during federal control of the railroads.

The re-incarnation of Phoebe Snow actually occurred on May 24, 1941, when, in the Freight Progress number of the *Railway Age*, the Lackawanna was referred to as "The Route of Phoebe Snow." Officers of the railroad explain, however, that they do not plan to launch an advertising campaign which will feature the perennial Miss. Nevertheless, such advertising as is done from time to time will contain the line recalling one of the famous themes of bygone days.

Advertising men have marveled over the hardiness of the slogan, which has persisted through the years despite the fact that no



First of 400 New Box Cars Reviving "Phoebe Snow" Theme Being Delivered to D. L. & W. by Magor Car Corporation

Left to Right, C. C. Hubbell, general purchasing agent; Kenneth H. Carpenter, superintendent car department; George J. Ray, operating vice-president; William White, president; Clyde F. Farmer, traffic vice-president; Frederick H. James, chief of motive power; Perry M. Shoemaker, superintendent; and Thomas J. McDermott, mechanical engineer.

expenditures were made to perpetuate it. Persons connected with the Lackawanna, who were in school in the days of Phoebe Snow's popularity, have had their children, in turn, referred to as members of the family of The Route of Phoebe Snow. In order to revive the theme, it would be necessary, they point out, to substitute for the Gibson girl of other days the debutante daughter of Phoebe Snow, attired in the Victory styles of today.

ODT Policy on Local Transportation

Office of Defense Transportation policy with respect to local passenger transportation was set forth in a statement issued April 18 by ODT Director Eastman. The statement was addressed to local transit operators and public regulatory authorities throughout the country.

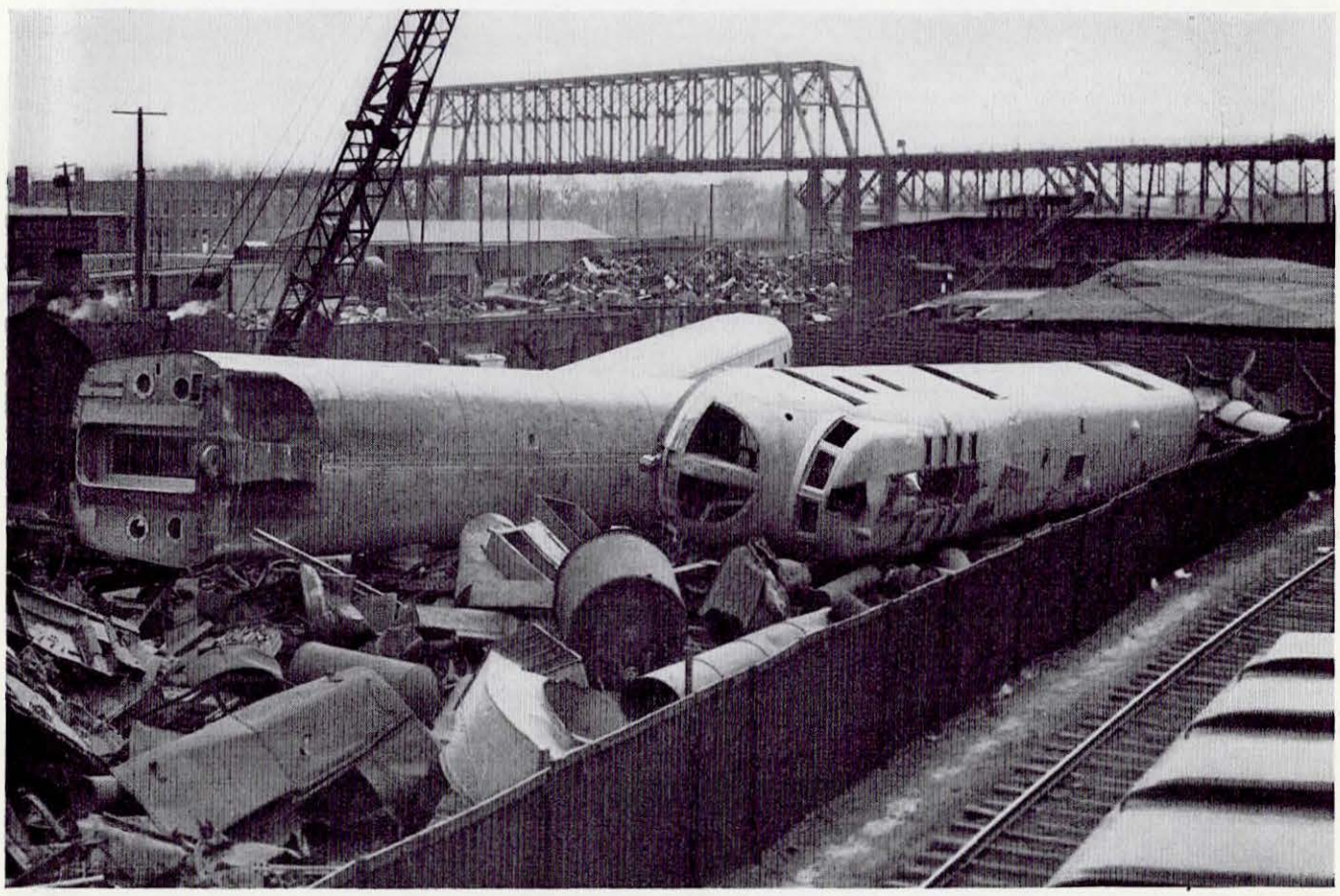
The policy calls for staggered business hours; full use of street railway lines; diversion of bus traffic to street-car routes; inauguration of turn-back services where traffic does not warrant every vehicle's running the full length of a route; fewer stops; less service in non-rush-hour periods; limiting new bus routes to services essential to the war effort; discontinuance of charter or special-party bus services carrying civilian groups to beaches, pleasure resorts, picnic places, points of historic interest, sports events, etc.; utilization of school buses to provide other service; gaging of street traffic controls to the efficient movement of mass transit vehicles; revision of schedules in the interest of eliminating idle time of vehicles; and use of parkways by buses, unless the roadway construction is too light to withstand such traffic.

The notice to the operators and regulatory authorities explained that the "statement of policy" is one of two means whereby ODT, through its Division of Local Transport, is "requiring that existing passenger transport vehicles be utilized to the utmost and that critical materials be conserved." The other means is through general or specific orders which "have and will be issued in matters which warrant the direct exercise of the authority vested in the Director. . . ."

McNear Says He Cannot Arbitrate Until Released from Suit

George P. McNear, Jr., president of the Toledo, Peoria & Western, and the National War Labor Board continued their correspondence this week about arbitration of the labor dispute which caused the government to seize the railroad. Following Mr. McNear's wire on April 11, to the effect that he could do nothing further about the Board's demand for arbitration until he is released from the suit of the government charging violation of the labor act, the Board wired him that if he did not participate in the move to end the controversy, steps would be taken to settle it without him. "In the event that you do not participate in the arbitration," the letter said, "Judge Benjamin Hilliard of Colorado, who has been appointed to handle the case, has been requested to make a thorough investigation of the controversy on its merits and submit recommendations to the War Labor Board, upon the basis of which the case will finally be determined." Mr. McNear replied on April 18: "As I wired you on April 11, I am now defending myself in the United States District Court in a case brought by our government against me and others at the instance of the Railroad Brotherhoods. Under these circumstances I cannot make plans for the future at the present time and can do nothing about your letter until I am released from that case. As soon as I am free to do so, I will take up your letter with our attorney, who is also handling this case in

"City of Salina" Yields Metal for Victory



Progress in Streamliners Puts End to 8-Year-Old Train

Outmoded, and too small to accommodate traffic between Kansas City and Salina, the pioneer "City of Salina" streamliner has been junked—so that its precious aluminum may fight the nation's enemies. This train was first inspected by President Roosevelt barely nine months after the announcement by W. A. Harriman in May, 1933, that the world's first streamlined train would be built for the Union Pacific by the Pullman-Standard Car Manufacturing Company. The train was delivered on February 12, 1934, and in May of that year completed a nation wide tour during which 1,195,609 persons passed through its cars in 65 cities.

It was placed on exhibit at the Century of Progress in 1934, and was put into service on January 31, 1935, between Kansas City, Mo., and Salina, Kans. It was taken out of service on December 16 and on the following day a steam train was substituted. Dismantling of the coaches began on February 13 and of the power unit on March 6.

the District Court, and communicate with you."

Eastman Shuns McNear Request

Joseph B. Eastman, director of the Office of Defense Transportation, in a reply made on April 17 to George P. McNear, Jr., president of the Toledo, Peoria & Western, turned down his request that featherbed rules be eliminated to demonstrate that "our government is really and seriously interested in the efficient and vigorous conduct of the war and that waste of man power will not be countenanced." In his request, reported in the *Railway Age* of April 18, page 801, Mr. McNear said, "Regarding your conference today to discuss the shortage of man power on the railroads, is not this the appropriate time to eliminate the featherbed rules of the train and engine employees and the gross waste of man power which results from such rules?"

Mr. Eastman's reply was as follows: "The train and engine service working rules which you placed in effect on December 29, 1941, are in issue in the pending labor controversy which is before the War Labor Board for determination. I would be exceeding my duty if I should undertake to pass upon the merits of these rules in advance of the Board's adjudication.

McNear and Aides Acquitted

A federal grand jury returned a verdict of not guilty on April 23 exonerating George P. McNear, Jr., president of the T. P. & W., Bruce Gifford, trainmaster, and Harlan H. Best, superintendent, and the railroad of charges of violating the Railway Labor Act.

The case went to the jury on April 22 after 15 days of testimony and argument. Mr. McNear rested his defense on the previous day without testifying. Twenty-five character witnesses and the testimony of Messrs. Best and Gifford were used to deny the charges made by the prosecution.

When the government completed its case on April 16, attorneys for the defense asked the court to direct the jury to acquit the defendants on the grounds that the evidence was insufficient, particularly against McNear, to support the 24-count charge filed by the government on January 5. It was contended that the testimony showed that employees did join the brotherhoods and elected them their bargaining agents in a mediation board election in October, 1940. At the same time, the constitutionality of the criminal sections of the Labor Act was questioned. The court denied this plea and the defense then presented its case.

The Vote on M. P. Reorganization Plan—Correction

The article in the *Railway Age* of April 4, page 715, regarding the recent voting by security holders on the Interstate Commerce Commission's plan of reorganization for the Missouri Pacific gave the erroneous impression that a majority of those holders had voted to reject the plan.

Actually, only six of the 16 classes of security holders eligible to vote failed to give the plan the required two-thirds approval, while 10 of the classes indicated their approval by a two-thirds vote.

Section 77 of the Bankruptcy Law provides that 66⅔ per cent of those voting in each class must approve the plan before the Commission can certify it to the court; but this does not mean that an adverse vote by any class, as happened in the instant case, dooms the plan. In that connection, Section 77 also provides that the district court, if it finds that the plan makes equitable provision for all security holders and that classes voting adversely had no justification for their action, may declare it effective even though the required 66⅔ per cent of each class of holders have not approved it.

Railway Tie Association

The Railway Tie Association will hold its twenty-fourth annual meeting at the Netherland Plaza Hotel, Cincinnati, Ohio, on May 6-7. In developing the program for this meeting, the officers have endeavored to key it to the critical problems of tie supply now confronting those in the industry and the railways who comprise their market. The program follows:

WEDNESDAY, MAY 6

Morning Session

Opening business
Address on The Railways in Times of National Emergency, by E. M. Hastings, chief engineer, R. F. & P., Richmond, Va.
Report of Committee on Manufacturing Practice
Report of Committee on Mechanical Equipment
Address on Production Problems of the Cross Tie Industry, by T. J. Turley, Jr., vice-president, Bond Brothers, Louisville, Ky.
Address on Ties in a Statistical Sense, by Dr. Julius H. Parmelee, director, Bureau of Railway Economics, A. A. R., Washington, D. C.

Afternoon Session

Report of Committee on Timber Conservation
Address on Labor as a Factor in Tie Production in 1942, by B. N. Johnson, Wood Preserving Division, Koppers Company, Richmond, Ind.
Report of Legislative Committee

WEDNESDAY EVENING—7:00 P. M.

Annual dinner—address on The Railways in War, by Col. R. S. Henry, assistant to the president, A. A. R., Washington, D. C.

THURSDAY, MAY 7

Morning Session

Report of Committee on Checking and Splitting
Address on The Maintenance of Standards in Period of Tie Scarcity, by W. D. Simpson, assistant chief engineer, maintenance of way, Seaboard, Norfolk, Va.
Address on The Maintenance Needs of the Railways in 1942, by H. R. Clarke, chief engineer, maintenance of way, C. B. & Q., Chicago
Report of Committee on Changes of Dimensions of Cross Ties During the Seasoning Period
Address on The Outlook for Preservatives as a Factor in Tie Supply, by John N. Forker, vice-president, Tar & Chemical Division, Koppers Company, Pittsburgh, Pa.
Closing business

N. I. T. League Promises All-Out Co-operation

All-out co-operation with all governmental, transportation, and shipper agencies in order to secure maximum utilization of transportation facilities necessary to win the war, was pledged by the National Industrial Traffic League, at its spring meeting in Cincinnati, Ohio, on April 14. To this end, the league has created a Special Committee on emergency transportation, headed by W. H. Day, Boston, Mass., to present the views of its members to the Interstate Commerce Commission, the Office of Defense Transportation, the War Shipping Administration, and other governmental and transportation agencies whose activities control and affect transportation. The resolution setting forth the views of the League and defining the duties of its Emergency Transportation Committee was published in the *Railway Age* of April 18, page 781.

That the Special Committee on Emergency Transportation matters, is hereby clothed with authority to represent and speak for the league in any and all matters that may arise in the Interstate Commerce Commission, in the Office of Defense Transportation, or elsewhere, having to do with the national transportation emergency.

Freight Car Loadings

Loadings of revenue freight for the week ended April 18 totaled 846,562 cars, the Association of American Railroads announced on April 23. This was an increase of 32,329 cars, or four per cent, above the preceding week, an increase of 137,769 cars, or 19.4 per cent, above the corresponding week last year, and an increase of 218,094 cars, or 34.7 per cent, above the comparable 1940 week.

As reported in last week's issue, loadings of revenue freight for the week ended April 11 totaled 814,233 cars, and the summary for that week, compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loadings
For Week Ended Saturday, April 11

District	1942	1941	1940
Eastern	168,381	148,125	136,023
Allegheny	180,195	143,208	126,127
Pocahontas	56,974	17,544	43,912
Southern	129,390	107,636	100,329
Northwestern	110,684	109,456	73,265
Central Western	109,985	103,636	96,266
Southwestern	58,624	50,203	43,183
Total Western Districts	279,293	263,295	212,714
Total All Roads	814,233	679,808	619,105
Commodities			
Grain and grain products	33,861	33,696	31,196
Live stock	11,117	10,788	11,146
Coal	160,646	31,592	113,642
Coke	13,768	9,415	7,326
Forest products	46,867	39,282	31,174
Ore	51,007	45,951	12,539
Merchandise l.c.l.	132,367	161,667	148,301
Miscellaneous	364,600	347,417	263,781
April 11	814,233	679,808	619,105
April 4	828,890	683,402	602,835
March 28	804,746	793,803	628,921
March 21	796,640	769,984	620,375
March 14	799,356	759,607	619,388
Cumulative Total, 15 Weeks	11,795,608	10,750,195	9,392,470

In Canada.—Carloadings for the week ended April 11 were 62,907, as compared with 57,455 in the previous week and 54,974 in the fifteenth week last year, according to the compilation of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
April 11, 1942	62,907	30,767
April 4, 1942	57,455	31,687
March 28, 1942	62,369	34,083
April 12, 1941	54,974	28,216
Cumulative Totals for Canada:		
April 11, 1942	917,657	476,306
April 12, 1941	814,153	432,326
April 13, 1940	704,529	363,779

ODT Seeking Maximum Use of Farm Trucks

Representatives of farm-truck operators met with government officials on April 17 under the auspices of the Office of Defense Transportation to work out plans for obtaining maximum use of farm vehicles for the duration of the war. Speakers at the meeting included Director Eastman of ODT; Grover Hill, assistant secretary of agriculture; M. Clifford Townsend, direc-

tor of the Office of Agricultural Defense Relations; and Robert Hicks, chief of the Farm Vehicle Section, Division of Motor Transport, ODT.

Summarizing results of investigations into farm products transportation, Mr. Hicks said among other things that surveys of the Division of Motor Transport "prove that there is a great deal of unnecessary duplication and inefficiency in country assembly and city distribution." He added: "If we are to conserve motor vehicles, rubber and other precious materials, it is necessary that both country collection and city distribution of farm products be reorganized along substantial lines. We must work for the elimination of daily, semi-weekly and weekly trips to market with less than full truck loads. This can be accomplished by the pooling of loads and vehicles and by well-planned farm-to-market hauling."

Eastman Opposes Local Option on Setting Clocks Ahead

Director Eastman of the Office of Defense Transportation on April 20 sent telegrams to the governors of New York, New Jersey and Pennsylvania, stating that plans now under consideration in those states to set clocks ahead an additional hour would be "wasteful of necessary public transportation facilities."

"Aside from probable lack of authority to take this action by reason of Congressional occupation of the field by act of January 20, 1942, I would deplore for transportation reasons any single state or scattered communities within a state attempting to take this step," Mr. Eastman said. "Unless observed on a wide basis as in past years, and I am informed this is unlikely, it would create growing demands for service, which would, to the extent they could be met, absorb crews, coaches, locomotive power, in a time when it is essential that passenger service be maintained on a most economic and efficient basis if carriers are to meet demands for military movements and necessary traffic directly connected with the war. In past years, even with weeks of planning for such a change, which was uniform in the entire Northeast, carriers had to make drastic revisions in schedules. Under present conditions, it is wasteful of necessary public transportation facilities to abruptly superimpose a partial observance of the earlier time."

General Port Embargo Placed in Effect

An embargo to prevent the movement of all commercial export freight to all Atlantic, Gulf and Pacific ports except when a permit has been obtained showing that ship space is available for such freight, was issued on April 15 by the Car Service Division of the Association of American Railroads. The purpose of the embargo is to prevent freight from accumulating at various ports.

This embargo, however, does not affect Army, Navy or lend-lease freight. It also does not affect freight shipments to those ports other than for export.

Before the railroads will accept export freight for shipment, a permit must be obtained from George C. Randall, manager of port traffic, 30 Vesey street, New York, or his designated representatives located in New Orleans, La.; Atlanta, Ga.; Houston, Texas; San Francisco, Calif.; Los Angeles or Seattle, Wash. This permit will be issued when a shipper shows that a definite steamship booking has been obtained.

For some months such a permit system has been required in order to move commercial export freight to various Pacific ports and also to New Orleans and certain other ports. In certain cases, permits have been required for the movement of export freight from Atlantic and Gulf ports to certain specified destinations. The embargo issued today, however, supersedes all previous ones dealing with export freight, the Car Service Division said.

Appointments to ODT Rail Transport and Traffic Movement Divisions

E. R. Hauer, engineer of motive power, Mechanical Advisory Committee, Chesapeake & Ohio, Erie, New York, Chicago & St. Louis, and Pere Marquette, has been

Allied-News Photo

A. G. Warren

appointed an assistant director of the Office of Defense Transportation's Division of Railway Transport. Mr. Hauer will be "in charge of mechanical operations," working "to increase further the efficiency of the nation's railway equipment," the ODT announcement said.

As noted in last week's issue, other recent ODT appointments have included the naming of A. G. Warren to be a Division of Traffic Movement assistant director in charge of the Division's Section of Traffic Channels; and of Samuel S. Bruce to be a Division of Railway Transport assistant director in charge of coal movement and equipment.

Assistant Director Warren of the Division of Traffic Movement was born December 28, 1896, in Jersey City, N. J., and he entered railroad service at that place in 1911 as a freight station clerk for the Pennsylvania. From 1914 until 1917 he was in turn clerk and chief clerk in the P. R. R. New York Division's Yard Department; and from 1918 until 1925 he served as freight movement director and assistant supervisor of train service in the office of the general superintendent of the P. R. R.'s New Jersey Grand Division. In January, 1925, Mr. Warren became chief clerk to the New York district manager of the Car Service Division, Association of American Railroads. He has since remained with the Car Service Division, serving from May until October, 1936, as car service agent at Washington, D. C., from October, 1936, until September, 1939, as car service agent at Detroit, Mich.; and from September, 1939, until February 1, 1942, as district manager at Detroit. On the latter date Mr. Warren was transferred in the same capacity to San Francisco, Calif., the position he was holding when he was granted a leave of absence to accept his ODT appointment.

Army to Use 25 Per Cent of Nation's Airliners

Accepting an offer of the airlines of the United States to participate in the war effort, the Army Air Forces have decided to use approximately 25 per cent of the nation's fleet of commercial airline transport airplanes for the carriage of military cargoes and personnel, the War Department announced on April 12.

The airliners, the announcement continued, will be allocated on a voluntary basis by the various airlines and will be operated under the direction of the Commanding General of the Air Service Command. They will be used to augment the present air transport cargo service and will be maintained and operated by airlines personnel.

It was also explained that passenger seats will be removed from the planes designated for this service and they will be equipped for carrying military supplies and personnel only to such points and at such times as may be necessitated by military requirements.

Moreover, key airline personnel will be encouraged to stay at their posts as the most effective and patriotic course unless and until the government indicates that it requires them in the armed forces.

The War Department announcement also declared that there is no present intention to make any further reductions in the airlines' equipment. A memorandum dealing with the acceptance of the airlines' offer stated that "with the foregoing accomplished, it is deemed that domestic airline service will have been reduced to the minimum essential to the war effort."

ODT "Directive" on Refrigerator Cars

Director Eastman of the Office of Defense Transportation has directed railroads and refrigerator car companies to distribute refrigerator cars for shipment of perishable products only. This action, said the ODT announcement of April 17, was taken "because of the increased volume of traffic moving in refrigerator cars and the increased distances such traffic is moving."

Explaining the move in a letter to the carriers, Director Eastman said:

"Certain commodities such as canned goods and bottled goods have been loaded in refrigerator cars during winter months

to prevent freezing damage. Such traffic can move without damage, however, in good, tight box cars during the moderate weather of the spring, summer and fall months. Substantially greater tonnage can be loaded in box cars than in refrigerator cars, which are needed for the movement of perishable products.

"Since much of this traffic, both box car and refrigerated, moves in the same general direction, the use of refrigerator cars is a waste of cars and motive power except when shipments move in the general direction of the current movement of empty refrigerator cars.

"In order to avoid a tight situation in the refrigerator car supply, all traffic not requiring refrigeration en route must be moved in box cars or other suitable cars until weather conditions make temperature protection necessary and refrigerator cars are again available.

"Shippers of general commodities should plan their shipping programs during the present emergency so that shipments will move during the period in which refrigerator car protection is unnecessary."

American Locomotive Company's War Production Well Ahead of Schedule

In a brief ceremony on April 20 held on the site where, one year ago, the American Locomotive Company delivered the first medium tank built by private industry, Duncan W. Fraser, president, told 7,000 employees that the company's current tank production was far ahead of its contract requirements. Observance of the anniversary, held during the noon hour at the plant, which is on a 24-hour production schedule, included the presentation of one-year service stripes to employees who aided in solving the early problems in tank production.

Since completion of the first tank, Mr. Fraser said, total deliveries have increased to several times the number of tanks called for by the original contract. Explaining that the company's participation in war production is not limited to tanks but includes also gun carriages, fragmentation bombs, Diesel engines for the Navy, shells and various other items in addition to locomotives required for hauling wartime goods, Mr. Fraser reported that production of these items was also ahead of schedule. Ordnance shipments for the first quarter of 1942 were reported to be almost as great as total shipments for 1941. Mr. Fraser stressed the resourcefulness of the company's personnel as instrumental in establishing the reported production records and pointed out that 80 per cent of the company's employees were now engaged in war production and that since October, 1940, many thousands have been added to the payroll to participate in war work.

Effect of Wage-Hour Law on Redcaps

Substantial increases in earnings, reduction in hours of work, and improved working conditions for redcaps employed by railroads and railroad terminals resulted during the first three years of the Fair Labor Standards Act. This is revealed in an economic analysis of a series of hearings and investigations held by the Wage Hour Division of the U. S. Department of Labor, released by the Division's research and statistics branch.

Based upon 5,250 pages of transcript of sworn testimony by 144 witnesses and upon hundreds of exhibits, the analysis is a finding of fact which does not draw any conclusions regarding the controversial points at issue. These points are (1) whether existing practices surrounding the employment of redcaps violate the letter or spirit of the Fair Labor Standards Act, (2) whether the practices can be regulated under existing provisions of the Act and (3) whether amendments to the Act are necessary. Hearings on the questions, presided over by Thomas Holland, were held in 1941 in New York City, Chicago, St. Louis and Washington, following the request for an investigation by the U. S. Senate in May, 1941.

L. Metcalfe Walling, administrator, will shortly make his report to the Senate on the questions to which answer was requested, it was pointed out. His report will be based upon the record of the hearing, the economic analysis of the record, and any briefs or oral argument which the railroads or unions present before him. Copies of the economic report have been furnished to railroad and union officials and are available to other interested parties upon request.

Hourly earnings for redcaps, according to the analysis, increased from about 30 cents to more than 40 cents between 1938 and 1941. This rise was accompanied by increased total weekly earnings and a general reduction in the workweek from about 56 hours to 48 hours, on a six-day schedule rather than the former seven-day week.

The report also shows that railroads and terminals generally have had to spend more money for redcap service since the Wage-Hour Law became effective than they did previously—more in the aggregate and more for each redcap, on the average. But by use of the "Accounting and Guarantee Plan" and the 10-cent-a-bag system, the employers have avoided an additional annual payroll for redcaps of approximately $2,000,000, which would have been required had redcaps been paid wages and been permitted to keep all passenger payments without accounting for them, it was stated.

* * * *

Urges "Staggering" to Aid Local Transit

Staggering business hours, school hours and shopping hours to reduce the peak loads on urban transit facilities—such was the urgent plea of ODT Director Eastman, addressing the National Safety Council, meeting in New York on April 20.

Noting that New York and Los Angeles, along with other cities, are beginning to get results with "stagger" programs, the speaker remarked that the success of such plans depends not on Washington, but on the self-reliance and the impelling drive of the people back home.

The advantages of the "swap riding" plan to conserve cars and tires were outlined, particularly because many plants vital to war production are located beyond the reach of common carrier services, forcing their employees to provide their own transportation. By doubling up, using one man's car one week and another's the next, the life of all motor vehicles will be prolonged and their owners will be contributing further to the ability of our country to fight.

Traffic accidents are as disastrous to this country as air raids would be—perhaps even more so—Mr. Eastman declared. Because our 33,000,000 motor vehicles and their tires are as precious a stockpile as we have, he urged his listeners to "save us from committing sabotage on ourselves" by taking care of them and using them only for essential purposes. Traffic accidents last year wasted enough man-hours to build 26 battleships. Loss of transportation equipment in accidents is even more help-

Jim Farley Presides as N. Y. Central Employees Buy a Bomber

Russell M. Church, representing 135,000 New York Central employees, presents their $170,062 "Buy a Bomber" contributions to Col. A. Robert Ginsburgh for the War Department, at Grand Central Station, April 19. Further details of the bomber campaign were published in last week's *Railway Age*, page 796.

ful to the enemy than air raids or battles, because they cost him nothing.

Mr. Eastman again emphasized the attitude of his office, favoring private, rather than government, operation of railroad in time of war.

"In the first World War," he said, "the government took over and operated the railroads. It has not done that in this World War. The railroads and all the other carriers are still in the hands of their private owners. They retain the power of management. The Office of Defense Transportation is not in the business of management and operation, except for a little railroad, the Toledo, Peoria & Western, which was dropped in its lap, I hope, temporarily, as the result of a labor controversy. It *is* the business of the Office of Defense Transportation to lend all possible aid and guidance to the carriers, on behalf of the government, for the accomplishment of the best transportation results, and it has powers which it can use to further these ends."

Another Union Complaint at ODT

The railroad unions, which recently assailed Director Eastman of the Office of Defense Transportation for issuing General Order No. 1 setting a minimum weight on l. c. l. carloadings and requiring the railroads to divert lighter loads to trucks, were hollering again last week about the failure of ODT to invite labor representatives to the April 14 meeting on wartime manpower problems of the carriers.

As noted in last week's issue, it was George M. Harrison, president of the Brotherhood of Railway Clerks, who spoke out against General Order No. 1. Now comes J. G. Luhrsen, executive secretary of the Railway Labor Executives' Association, to comment on the manpower meeting as follows:

"Why labor is permitted no voice on such an important and grave subject is beyond understanding. Labor has already secured salient information on where shortages exist and in what classifications they fall, and failure to consult with labor virtually gives the impression that railroads can be run without employees. As a matter of fact, many carriers have practiced a short-sighted economy at the expense of labor. They have tried to avoid adding workers where needed, but this payroll saving has meant costly delays in defense transportation. Labor's views in this regard should be given full consideration."

Mr. Luhrsen was thus quoted in the April 21 issue of "Labor," which went on to say: "Other rail union leaders pointed out further that Eastman, by failing to consult labor, has adopted a policy contrary to that laid down by the War Production Board. They declare that Donald M. Nelson, war production chief, has constantly sought labor's views and has ordered labor-management cooperation in war industries for increased output. However, even though the transportation industry is the key to the war program and rail unions represent over a million workers, they are brushed aside on matters of policy vitally affecting labor, the union spokesmen asserted."

Otto S. Beyer, director of ODT's Division of Transport Personnel, stated on April 18 that he had seen the article in "Labor." His only comment was that his office had no disposition to exclude labor representatives from discussions of interest to labor; and that the April 14 meeting was called for a discussion of those phases of the manpower problem which are of primary interest to management. As noted in the *Railway Age* of April 18, page 795, the railroads were represented at the meeting by M. J. Gormley, executive assistant of the Association of American Railroads, and Dr. J. H. Parmelee, director of the Bureau of Railway Economics.

War Traffic Spurs Swiss Double-Tracking

On the St. Gotthard Tunnel route through neutral Switzerland, one of the most important railway connections between Italy and central Europe, new traffic records were established in 1941, when an average of 40 passenger and 80 freight trains moved over the line daily.

Portions of this difficult mountain route are single track. The Swiss Federal Railroads plan to complete a double-tracking program as soon as conditions permit, and meanwhile, to overcome one of the "bottlenecks" on the northern approach to the St. Gotthard tunnel, are pushing construction of a new Axenberg tunnel, parallel to the old single track tunnel along the shore of Lake Lucerne. It is expected that the new tunnel, just over two miles in length, will be finished this fall.

Retirement Board Operations in March

Railroad retirement benefits certified by the Railroad Retirement Board in March amounted to $10,655,528, bringing total payments from the beginning of operation to $524,969,418. Through March the Board had certified 157,965 employee annuities, 48,559 pensions to former carrier pensioners, 3,240 survivor annuities, 6,266 death benefit annuities, and 52,042 lump-sum death benefits.

"Improved employment conditions in the railroad industry have led to a decrease in applications for employee annuities," the Board said. The total of 14,157 applications received by the Board in the nine months ending March, 1942, was 14.1 per cent less than the total for the corresponding months last year. Chiefly as a result of the drop in applications, certifications of new employee annuities averaged only 1,474 a month for the first nine months of fiscal 1942 as compared with a 1941 monthly average of 1,721, a decline of 14.4 per cent. In March the Board certified 1,249 new annuities.

Employee annuities in force at the end of March totaled 125,052 with a monthly amount payable of $8,240,499. The average monthly payment was $65.90. Pensions in force at the end of the month numbered 28,437. The total monthly amount payable was $1,676,229 and the average payment $58.95.

Collections under the Carriers Taxing Act for the first quarter of 1942 amounted to $47,011,495, 34.4 per cent higher than in the first quarter of 1941. Total tax collections since the beginning of operations amounted to $642,400,283.

Unemployment insurance operations in March continued the decline begun in January. Claims received in the regional offices in the four weeks February 28-March 27 totaled 62,885, a drop of nearly 11 per cent from the February figure. Applications for certificate of benefit rights declined even more, from 4,616 in February to 2,542 in March. Benefits certified in March totaled $1,175,733, about $153,000 less than in the preceding month. The average benefit on claims with a maximum of 10 compensable days was $20.47.

Employment service operations expanded in March with the opening of the hiring season for track labor. Notifications were received of 4,793 openings, of which nearly 4,500 were with railroad employers. More than 6,200 workers were referred to available vacancies and 3,143 were placed. Nearly 62 per cent of all March placements, or 1,950, were as track laborers.

Supply Trade

The Carnegie-Illinois Steel Corporation has been extended the privilege of flying the United States Navy's highest token of commendation, the All-Navy "E" burgee, as evidence of its all-out effort in the production of war materials.

Charles E. Miller has been appointed a vice-president of the **O. C. Duryea Corporation,** with headquarters in the Field building, Chicago. Mr. Miller was incorrectly reported as being the company's chief engineer in the *Railway Age* of April 18.

The "Production for Victory" edition of U. S. Steel News, currently published, discloses an unprecedented number of production records attained by subsidiaries of the **United States Steel Corporation.** One subsidiary is cited as having established 157 new production records in 1941. These included new high marks by 22 of its 57 blast furnaces, by 16 of its 25 steel producing departments, by 46 out of 92 primary and finishing mills, as well as 73 all-time records in plants producing molds, wheels, axles, armor forgings and castings. Sections of the victory number are devoted to the wartime problems of safe-guarding production and first aid training. Portraying the active part taken by employees in production for victory, the magazine also contains articles describing the voluntary leisure time activity of the corporation's employees. Four pages are devoted to government bond sales campaigns under the title "The Bond Wagon's Rolling."

OBITUARY

Fred J. Maeurer, for the past 13 years associated as a specialist with the applied engineering department, Air Reduction Sales Company, died April 13. Mr. Maeurer was associated with the oxyacetylene industry for nearly 33 years, having joined the Davis-Bournonville Company, Jersey City, N. J., in 1909 and continued therein when that company was acquired by Airco in 1922.

Equipment and Supplies

LOCOMOTIVES

THE PATAPSCO & BACK RIVERS has placed an order for four Diesel-electric switching locomotives, including two of 1,000 hp. each and two of 600 hp. each, with the Baldwin Locomotive Works.

THE PHILADELPHIA, BETHLEHEM & NEW ENGLAND has placed an order for four Diesel-electric switching locomotives, including two of 1,000 hp. each and two of 600 hp. each, with the Electro-Motive Corporation.

FREIGHT CARS

THE BETHLEHEM STEEL COMPANY is inquiring for 12 100-ton flat cars for use in the company's own plants.

THE UNITED STATES WAR DEPARTMENT has ordered 14 kitchen cars from the St. Louis Car Company. These are in addition to 16 previously ordered from this company as reported in the *Railway Age* of March 14.

THE UNION PACIFIC, reported in the *Railway Age* of March 21 as having ordered 1,000 gondola cars from the Pullman-Standard Car Manufacturing Company, has suspended this order awaiting action by the War Production Board.

THE ILLINOIS CENTRAL, reported in the *Railway Age* of April 18 as intending to order 1,000 hopper cars from the Pullman-Standard Car Manufacturing Company upon approval of the War Production Board, has decided not to purchase these cars.

WPB's Equipment Program

Proceeding with its work of administering the April 4 limitation orders whereby the War Production Board took control of the production and delivery of cars and locomotives, the Board's Transportation Branch has thus far been authorizing production schedules in more or less piecemeal fashion. Insofar as could be learned there is as yet no overall final plan breaking down the whole program by types of cars and shops where they will be built.

The freight car program with which the Branch is dealing contemplates the construction of 37,000 cars, i. e., the 19,000 remaining in the program authorized in January by the former Supply Priorities and Allocations Board and the 18,000 authorized by WPB following issuance of the limitation orders. Seemingly such practical considerations as the location of materials inventories, the assembly-line set-up in the builders' plants, and the urge to complete the program as soon as possible will have an important bearing on decisions as to production schedules. It is anticipated that work on the SPAB program will be virtually completed by the end of May, while the aim is to clean up the whole program by October 1.

As to the types of cars which will be built, the Transportation Branch has been receiving recommendations from the Office of Defense Transportation, while ODT in turn has consulted with the Association of American Railroads. The first tentative breakdown of the WPB's 18,000 was: 5,750 hopper cars; 5,750 gondola cars; 2,500 flat cars; and 4,000 tank cars. It is understood, however, that later revisions may bring changes in order to work in some box cars. Also, a small number of cabooses or special-type cars may be permitted; and if so the number of tank cars would be reduced accordingly.

Meanwhile, the 19,000 cars remaining undelivered under the SPAB program have been allocated to builders, and it is expected that for the most part they will continue to be delivered to railroads in accordance with schedules in effect prior to the freezing order. While this 19,000 as well as WPB's 18,000 are subject to rationing, it is not expected that the Transportation Branch will be too tough on that score. In other words, it is understood that while WPB wanted control of the situation, it nevertheless recognizes that the free interchange of freight cars and the car-distribution powers of the Car Service Division create a situation wherein it makes little difference which roads get the cars.

Eastman Appeals to Truck Operators

With some 50,000 applications received during the first month's operation of the commercial-vehicle rationing program, the Office of Defense Transportation in an April 16 statement asked operators who cannot meet minimum requirements to refrain from applying for new trucks, truck-tractors, or trailers. The rationing plan is administered jointly by ODT and the War Production Board, and the statement said that it has become apparent that many applications are coming from operators "seeking to buy commercial vehicles as they normally would under a business-as-usual economy."

The ODT suggests that before applying for a new vehicle each operator should ask himself this question: "Would a new truck in my possession actually help, directly or indirectly, in winning the war?"

General Conservation Order M-100, which set up the rationing plan, shows the order in which the demand for new vehicles will be met. Vehicles used in connection with the "construction, maintenance and supply of essential rail, highway, water, pipeline, and air transportation facilities" are included in Class 2. The ODT statement suggested, however, that even those thus qualified should resort to applications for new vehicles only after they have exhausted the following possibilities: (1) The used truck market; (2) leasing vehicles not being fully used by other operators; (3) pooling equipment with other operators; (4) maintaining present equipment better than ever before; (5) working present equipment longer hours and more days; (6) salvaging equipment which in normal times would not be used further.

Giving "a brief picture of the supply situation," the ODT statement had this to say: "There will be no production of trucks after the March quotas are completed; trailers are being produced in quantities much below normal production. The only certain supply of trucks is the pool now held by manufacturers and dealers, representing stocks frozen January 2 and the diminishing production of the first months this year. In March, after lend-lease and other essential requirements had been met, this pool was estimated to consist of 150,000 truck and truck-tractor chassis. Broken down, the supply consists of 45,000 light, 95,000 medium and 10,000 heavy units. The medium and heavy types—about 105,000 units in all—are the most important and are held for distribution over a period of 22 months. In contrast to the supply available for the next two years, about 700,000 units were sold in the United States in 1941 alone."

Priorities and Prices

Following are references to orders of interest to railroads, issued by the War Production Board and the Office of Price Administration since April 11.

Auto trucks—Production of all medium and heavy trucks for civilian use will be discontinued after existing quotas have been completed, according to Order L-1-c, issued April 12. Production of passenger cars and light trucks were halted February 1. The stop-production order applies also to off-the-highway vehicles for civilian use. These are heavy, rubber-tired vehicles too large for ordinary highway travel and used principally in construction. Producers of medium trucks will have until April 30 to complete the production quotas fixed for February, and producers of heavy trucks will have until May 31 to clean up amended March quotas. The trucks cannot be equipped by the manufacturer with tires, casings or tubes. The stop-production order does not apply to output of truck trailers, bodies or passenger carrier buses of certain types.

Boilers—Second hand steam boilers and electric generating equipment, valued at $1,000 or more, may not be purchased or sold without special permission, according to the terms of Order L-102, issued April 11. The action was taken to promote efficient use of such equipment in the war effort.

Fire hose—Fire hose is not assignable as operating supplies under the terms of the Repair, Maintenance and Operating Supplies Order P-100, according to an interpretation issued April 16.

Paint—Conservation Order M-56, issued April 16, restricts the use of natural resins in any calendar quarter to 50 per cent of the amount used in the corresponding quarter of 1941, and prohibits entirely their use in freight car paints as well as in barn paint, floor finishes, interior house paints and porch and deck paints. Asphaltic and pitch bases can be used for some of these products and pine rosin is adaptable to others. The order does not restrict the sale of paints or varnishes already manufactured.

Plumbing supplies—All retail sales of plumbing and heating equipment, with the exception of sales of $5 or less or sales carrying an A-10 or better preference rating, were frozen on April 16 by Order L-79, which covers any equipment, fixture, fitting, pipe or accessory of a type used in or connected to a water, sewer or gas system, or

any primary heating unit or accessory designed to provide building warmth.

Shellac—Order M-106, issued April 14, freezes 50 per cent of all inventories of shellac of 10,000 lb. or more and 50 per cent of all future imports, and restricts its use except for electrical equipment, communication instruments, marine paints for vessels other than pleasure craft and military uses.

Stokers and oil burners—Limitation Orders L-54, covering oil burners, and L-75, covering coal stokers, effective April 15, limit the production of Class A oil burners and coal stokers for commercial and industrial uses to orders bearing a preference rating of A-10 or better, while stopping production of smaller units after May 31. A Class A oil burner has a capacity in excess of 15 gal. per hr., and a Class A coal stoker has a capacity in excess of 60 lb. per hr.

Compressors—Order L-100, announced April 17, prohibits the placing or acceptance of orders for heavy compressors unless specific authorization is made on form PD-240. Applications must be made on form PD-415. Manufacturers may deliver compressors only in accordance with a set procedure established by the director of industry operations. This involves a filing by the manufacturer of a statement showing compressors available for distribution, a list of all orders and an application on form PD-416 for permission to make delivery. Applications must be made on or before the 25th day of each month. Heavy compressors subject to the terms include any crank and flywheel type horizontal reciprocating compressor or dry vacuum pump having a displacement of 50 cu. ft. per min. or more, or any other reciprocating compressor having a displacement of 300 cu. ft. per min. or more, and include new, second hand and reconditioned equipment.

Scarce materials—The Conservation and Substitution Branch of the Bureau of Industrial Conservation made public a report on April 17, grouping materials in the order of their scarcity. Group 1 lists materials that generally are critically essential for the prosecution of the war. For these materials, civilian industry must largely find substitutions or anticipate stoppage of manufacture of articles containing them. Chemicals derived from scarce metals are, in general, of the same order of scarcity as the metals. Group 2 comprises materials also necessary for war production and essential industrial activity, but the supply is not so severely restricted. Necessary civilian industry may obtain limited supplies from this group when specific cases are sufficiently urgent. Group 3 includes materials that are more available for substitutions, although in no case can the supply be considered unlimited, since other factors than the material itself may determine the amount available.

Prices

Bituminous coal—A meeting of the chairmen of the 22 producing districts set up under the Coal Act, and presidents or other executives of wholesale bituminous coal distributing organizations was held April 20, under the direction of OPA, to discuss maximum price regulations for bituminous coal when sold for delivery at a mine or preparation plant.

Lumber—Revised Price Schedule No. 19 for southern pine lumber was amended April 16 to halt evasions and codify past interpretations. The amendment clarifies the point that wholesalers' discounts were taken into account in computing maximum prices; prohibits the sale at a single flat price of any lot consisting of lumber subject to the schedule and lumber not subject to price control; prohibits elimination or reduction of cash discounts in effect before issuance of the price schedule; prohibits the buying of lumber of random lengths and reselling on a specified length basis, and refuses permission for charges made for workings, specifications, services or other extras not specifically provided for in the schedule. It makes illegal the practice of selling long leaf and short leaf at a flat price. A seller who, before issuance of the price schedule, granted a discount for cash may not eliminate or decrease this discount. If the seller's terms previously were 60 days net, he may not reduce the 60-days credit period. The maximum price for sales on combination grades shall be the maximum price for the lowest grade in the combination. Sellers may not obtain the price for dry lumber on a sale of green lumber by stating that the purchaser has waived the moisture content. Quoting a gross price above the ceiling, accompanied by a discount bringing the price below the ceiling, is prohibited. Averaging of freight rates is permitted only when an order on which a single flat delivered price has been quoted and accepted or is shipped from more than one mill. Transportation costs always must be set forth as a separate charge on all invoices.

Scrap brass—Maximum prices for all yellow brass scrap except yellow brass castings were fixed on a copper content basis in Amendment No. 3 to Revised Price Schedule No. 20 on April 17. The prices are on an f.o.b. point-of-shipment basis. In the list, No. 1 copper wire is 10 cents a lb.; No. 1 heavy copper, 10 cents; No. 2 copper wire, 9; mixed heavy copper, 9; light copper, 8; bell metal, 14.50; high-grade bronze gears, 12.75; babbitt-lined brass bushings, 12.75; red trolley wheels, 10.75; hard red machinery brass, 10; soft red brass, 9.50; soft red brass borings, 9.25; aluminum bronze gears, 9; unlined standard red car boxes, 8.50; lined standard red car boxes, 8; cocks and faucets, 8.25; old rolled brass, 8; brass pipe, 8; yellow brass castings, 7.25; refinery brass (containing 60 per cent copper), 9.25, and refinery brass (containing 50 to 60 per cent copper), 9 cents.

Tires—Retreaded or recapped passenger car tires frozen in the hands of retreaders since February 19 were released, effective April 17, to owners who can qualify for retreading certificates. If the owner is the operator of an eligible vehicle and can get a retreading certificate from a local board, he may present it to the retreader and redeem the tire.

Typewriters—Rationing orders, amended April 12, postponed the date for allocating frozen stocks of typewriters from April 13 to April 20, and broadened the eligibility base for purchasing new and used machines to include manufacturers of materials essential to making specified war products under a priority rating of A-1-d or higher. Portables may be purchased by any plant, project or facility operating under a priority rating of A-3 or higher. All typewriters now being manufactured, as well as new machines in the hands of manufacturers, are still frozen. Unrestricted rental of new portables as well as used typewriters of all kinds has been in effect since March 25.

Copper—The Cincinnati Railway Supply Company, Cincinnati, Ohio, and six refiners were permitted to charge and receive premiums on casting copper sales in less-than-carload lots under Amendment No. 1 to Revised Price Schedule No. 15, issued April 17. The premiums are one cent a lb. in quantities of less than 5,000 lb. and ¾ cent a lb. in quantities up to a carload. The order extends to July 1 to provide a reasonable period for final completion of certain contracts.

Conservation of Tin

In an A. A. R. Mechanical Division letter, dated April 11, attention is called to the importance of doing everything possible to restrict the use of tin to absolute necessities. In the interest of tin conservation, every railroad is requested to give fair trial to such substitutes as have been developed and offered for use. In this connection, the letter states that the North American Smelting Company, Philadelphia, Pa., has developed a tin-free solder known as North American Victory Solder, the possibilities of which should be fully developed.

In addition, the Federated Metals Division of the American Smelting & Refining Company has developed "G" babbitt metal which contains little or no tin. (One large railroad reports testing one of these babbitts with about 1 per cent tin with satisfactory results.)

The Magnus Metal Corporation advises that it is in position to supply "Satco" metal (which contains 1 per cent tin) for use as a babbitt metal. This information is transmitted with the suggestion that these companies be contacted for information as to materials which may facilitate materially restricting the use of tin by railroads.

Construction

CANADIAN NATIONAL.—This road has recently awarded a number of contracts for improvements and new construction, all of which involve an expenditure of more than $20,000 as follows: To G. A. Baert, Winnipeg, Man., for new roofing on the frog shop at Weston, Man.; to C. M. Miners Construction Company, Saskatoon, Sask., for extending the enginehouse at Swift Current, Sask.; to F. W. McDougall Construction Company, Calgary, Alta., for extension of and alterations to the station facilities at Lethbridge, Alta.; to T. H. Bell, Vancouver, B. C., for rebuilding and repairing timber bridges and transfer slip approaches at various points on Vancouver Island; to Dawson, Wade and Company, Ltd., Vancouver, for filling a bridge and constructing an 8-ft. by 8-ft. reinforced concrete box culvert on the Princeton subdivision; and a contract to Moncrieff & Vistaunet Construction Co., Vancouver, for providing asphalt platforms, curbing, gutters, etc., in the coach yard at Vancouver.

ERIE.—Traffic route control is being installed between "BK" tower, Meadville, Pa., and "XN" tower, Shenango, Pa. The estimated cost of this improvement is $46,500.

LEHIGH VALLEY. — The Pennsylvania Public Utility Commission has approved plans calling for the reconstruction of the crossing above grade at a point in Bradford county where the two tracks of this railroad's State line and Sullivan branch are crossed by state highway route No. 15 by means of a wooden "A" truss bridge supported on masonry abutments. The general plan of the improvement provides for the replacement of the present superstructure with a steel and reinforced concrete bridge which will provide a roadway 34 ft. in width with a 6-ft. sidewalk located on each side thereof. Total cost of the improvement is estimated at $8,500.

NEW YORK, NEW HAVEN & HARTFORD.—This company has authorized the reconstruction of bridge No. 3.48 at Montowese, New Haven, Conn., at estimated cost of $50,000.

SOUTHERN PACIFIC.—In addition to many new sidings and siding extensions, amounting to about 37 track miles, which were placed in service in 1941, this road has a large program for additional mileage of both siding extensions and new or extended yard tracks, with related improvements, which will be placed in service early in 1942. Some of the largest of the projects on this program are briefly as follows:

At the West Oakland (Cal.) yard more than $300,000 will be spent for the construction of additional yard tracks and the relocation and improvement of freight car facilities. This will involve the construction of approximately 61,000 ft. of new tracks, the removal or relocation of approximately 31,000 ft. of tracks and the laying of 114,000 ft. of rail.

At Polvo yard (Tucson, Ariz.), more

(*Construction Continued on page 842*)

SOUTHERN PACIFIC COMPANY

ANNUAL REPORT OF THE BOARD OF DIRECTORS TO STOCKHOLDERS FOR THE YEAR ENDED DECEMBER 31, 1941

Your Board of Directors submits this report showing, briefly, the results of the operations and financial affairs of the Southern Pacific Company and affiliated companies for the year ended December 31, 1941.

Income

Southern Pacific Transportation System (Southern Pacific Company and Transportation System Companies, Consolidated) and Separately Operated Solely Controlled Affiliated Companies (Excluding Southern Pacific Railroad Company of Mexico).

Southern Pacific Transportation System	Year 1941	+ Increase − Decrease	Per Cent
Freight revenues	$244,440,997.75	+ $55,227,848.73	29.19
Passenger revenues	31,596,317.21	+ 7,116,195.59	29.07
Mail and express revenues	8,975,030.52	+ 1,051,917.07	13.28
All other operating revenues	12,773,980.10	+ 2,458,084.75	23.83
Total railway operating revenues	$297,786,325.58	+ $65,854,046.14	28.39
Maintenance of way and structures	$30,163,659.15	+ $5,654,910.89	23.07
Maintenance of equipment	48,006,780.34	+ 9,070,695.08	23.30
Traffic expenses	6,288,071.31	+ 136,717.06	2.22
Transportation expenses	105,141,576.00	+ 18,015,585.50	20.68
All other operating expenses	14,385,539.92	+ 1,839,006.47	14.66
Total railway operating expenses	$203,985,626.72	+ $34,716,915.00	20.51
Net revenue from railway operations	$93,800,698.86	+ $31,137,131.14	49.69
Railway tax accruals	21,428,924.82	+ 3,570,880.13	20.00
Equipment and joint facility rents—Net	14,934,472.62	+ 2,594,808.55	21.03
Net railway operating income	$57,437,301.42	+ $24,971,442.46	76.92
Income from lease of road and equipment, and miscellaneous rent income	$1,408,864.26	− $92,689.60	6.17
Dividend income	3,535,850.00	− 34,294.24	.96
Income from funded securities	292,698.41	+ 2,932.97	1.01
Other income accounts	2,762,044.89	+ 50,420.69	1.86
Total other income	$7,999,457.56	− $73,630.18	.91
Total income	$65,436,758.98	+ $24,897,812.28	61.42
Miscellaneous rents	$355,434.66	− $236,002.24	39.90
Other miscellaneous deductions from income	815,007.95	+ 45,800.75	5.95
Total miscellaneous deductions	$1,170,442.61	− $190,201.49	13.98
Income available for fixed charges	$64,266,316.37	+ $25,088,013.77	64.04
Rent for leased roads and equipment	$58,100.71	+ $23,915.49	69.96
Interest on funded debt—Bonds and notes	28,914,753.38	− 193,509.62	.66
Interest on funded debt—Nonnegotiable debt	922.13	+ 73.38	8.65
Interest on unfunded debt	533,962.52	− 185,432.17	25.78
Total fixed charges	$29,507,738.74	− $354,952.92	1.19
Net income of Southern Pacific Transportation System	$34,758,577.63	+ $25,442,966.69	273.12
Separately Operated Solely Controlled Affiliated Companies:			
Operating in the United States—Net deficit excluding interest on bonds of separately operated Solely Controlled Affiliated Companies owned by Southern Pacific Company not included in its income	*196,147.92*	− 1,891,373.78	90.60
Operating in the Republic of Mexico (excluding Southern Pacific Railroad Company of Mexico)—Net income	11,237.23	+ 92,977.51	....
Consolidated Net Income	$34,573,666.94	+ $27,427,317.98	383.79

Southern Pacific Transportation System

Revenues. The gain in total railway operating revenues, compared with 1940, reflects the effect on rail traffic of the increase in industrial production and other business activities under the impetus of the armament program; enlargement of the forces and facilities of the Army and Navy; and the diversion to other services of a number of steamships from coastal and intercoastal routes which had carried a substantial tonnage of freight in competition with the railroads.

A decrease in water line revenues, principally due to requisition by the United States of the Company's ocean steamships, was offset by decreases in water line operating expenses, taxes, and pier rentals.

Freight revenues were the largest in the history of the Company. The source of these revenues by commodity groups, and the increases compared with 1940, are shown in the following tabulation:

	Revenues	Increase	Per Cent
Products of Agriculture	$57,708,665	$6,749,503	13.24
Animals and Products	7,000,513	770,613	12.37
Products of Mines	18,892,424	6,532,547	52.85
Products of Forests	34,273,981	8,996,284	35.59
Manufactures and Miscellaneous	112,595,637	30,321,098	36.85
Total Carload Freight	$230,471,220	$53,370,045	30.14
Less-than-Carload Freight	13,969,778	1,857,804	15.34
Total	$244,440,998	$55,227,849	29.19

The net ton-miles of revenue freight moved by the rail lines exceeded the previous high record established in 1940. However, the average revenue per net ton-mile declined to 0.988 cents, falling below one cent for the first time since 1917.

Passenger revenues showed a substantial increase, mainly due to the movement of military and other government traffic, travel by soldiers and sailors on furloughs, and civilian travel for business purposes.

Mail and express revenues were larger, principally as the result of increased traffic, much of the gain in express revenues being due to government shipments.

The net increase in all other operating revenues was mainly due to gains in revenues from dining car, buffet car, and switching services, and Pullman car earnings.

Expenses. The increase in expenses was principally due to the increase in volume of rail traffic. Other causes of increases included the cost of wage rate increases awarded employes retroactive to September 1, 1941, as the result of mediation under the Railway Labor Act; higher prices of material and supplies other than locomotive fuel; more rail laid in repairs and renewals; and larger expenditures for repair of storm damage. A decrease in water line expenses, due to discontinuance of steamship operations, partly offset the increase in rail line expenses.

The average number of employees was 67,423, an increase of 8,251, or 13.94 per cent, compared with 1940. Pay rolls comprised $127,092,608.26 of total operating expenses, an increase of $23,771,507.08, or 23.01 per cent, over 1940, including approximately $5,177,600 representing the cost of the wage award applicable to the last four months of the year.

Approximately 352 track miles of new rail, principally 113-lb. and 132-lb. weight per yard, and 273 track miles of relayer rail of various weights, were laid in repairs and renewals; compared with approximately 305 track miles of new rail and 304 track miles of relayer rail laid in 1940.

Prolonged rainfall during the first three months of the year, along the California coast, and especially severe storms in the coastal area between San Francisco and Los Angeles, caused extensive damage to roadbed and track, and interruption of through traffic for short periods of time. Heavy rain storms in the Coachella and Imperial Valley areas of southern California, in August, and in New Mexico and western Texas, in September, caused considerable damage to tracks. Expenditures for repairs and protective improvements in 1941, due to storm damage, amounted to approximately $1,602,000, of which about $1,368,000 was charged to operating expenses, compared with $472,000 of such operating charges in 1940.

In February and thereafter, forces at all principal locomotive and car shops worked six days a week, and these forces were increased progressively through the year, with the result that, despite increased service required of all rolling stock, the general condition of equipment was improved, compared with the condition at the end of 1940.

In addition to 20 new steam passenger locomotives and 40 new Diesel-electric switchers placed in service, it was necessary to effect return of 33 steam locomotives from service on affiliated lines; and, in December, 1941, and the forepart of Janu-

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ary, 1942, to borrow 17 steam locomotives from other railroads for use on the Pacific Lines.

As a result of a decrease in the average speed of freight trains, due to greater density of traffic, the gross ton-miles of freight moved per train hour decreased 1.77 per cent from the high record of the previous year. However, an increase of 38.72 per cent, in the net ton-miles of revenue freight carried, was accompanied by an increase of only 23.76 per cent in freight train-miles, due to the heavier average loading of freight trains during the year.

Taxes. Railway tax accruals took 22.85 cents of each dollar of net revenue from railway operations for 1941, and are equivalent to $5.68 a share of the outstanding capital stock of Southern Pacific Company. The accruals by classes of taxes are as follows:

Federal unemployment insurance taxes	$4,016,705.96
Federal retirement (pension) taxes	4,022,658.26
Other Federal and miscellaneous taxes	2,115,057.41
State, County and City taxes	11,274,503.19
Total	$21,428,924.82

The substantial increase in taxes, compared with 1940, is principally due to provision for Federal taxes on income and capital stock, and increases in retirement and unemployment insurance taxes resulting from employment of larger forces during the year and wage increases awarded employees effective September 1, 1941.

Rents. Net charges for equipment rents increased mainly because of a larger number of freight cars of other companies moving over your Company's Lines as a result of the increase in the volume of freight traffic.

Other Income. The net decrease in income from sources other than railway operations was substantially more than offset by a net decrease in miscellaneous deductions from income. The principal income fluctuations were a decrease of $120,000 in dividends received from Pacific Fruit Express Company; a decrease of $99,999.99 compared with dividends received in 1940 from the Reward Oil Company, which was dissolved in December, 1940; and an increase of $164,359.75 in dividends received from Pacific Greyhound Lines. The decrease in miscellaneous rents paid was the result, mainly, of release of various piers which had been used in connection with steamship operations.

Fixed Charges. The decrease in total fixed charges was principally due to a net decrease in the amount of funded debt outstanding in the hands of the public and repayment of short term loans, during the year.

General. On December 13, 1941, your Company joined other railroads in requesting the Interstate Commerce Commission to authorize a uniform increase of 10% in passenger fares, freight rates and accessorial charges, with certain exceptions, to provide additional revenues necessary to meet in part increases in operating expenses due to higher wage rates, increased cost of material and supplies, and the added cost of safeguarding railroad properties and operations during continuance of the war. The request for authority to increase interstate passenger fares, except special fares for soldiers and sailors on furlough and extra fares applicable to certain trains, was granted January 21, 1942, and the increase was made effective February 10, 1942. Intrastate fares were increased correspondingly in Oregon, Arizona, and New Mexico, on February 10; and in California, with the additional exception of commutation fares, on February 11. Decisions by the regulatory commissions of others states are expected shortly. Hearings on the freight rate increase have been held by the Interstate Commerce Commission and an early decision is anticipated.

As mentioned in last year's report, filing of land grant claim releases enabled your Company to apply full commercial charges for transportation of persons and property for the United States, except for military or naval forces and property of the United States moving for military or naval purposes. Differences of opinion have arisen as to what constitutes military and naval property of the United States, such property not being defined in the statute. Bills providing for amendment of the statute have been introduced in Congress, which, if enacted, will clarify the law with respect to charges applicable to government traffic.

To provide for more dependable service under conditions of increased density of rail traffic, and due to the necessity of giving preference to military traffic, it was necessary to lengthen freight schedules between California points and Portland, Oregon, and from transcontinental points westbound to the Pacific Coast; as well as to suspend operation of certain passenger trains, particularly since war was declared.

The extra fare passenger train "Forty-Niner" was discontinued when a second Diesel-powered streamliner was added to the "City of San Francisco" schedule between San Francisco and Chicago, in July, 1941. In the same month, "Daylight" type service was established between San Francisco and Los Angeles on the San Joaquin Valley Line when lightweight, streamlined passenger-train cars were provided for the "San Joaquin."

Motor truck services coordinated with rail freight operations were further extended during the year. At December 31, 1941, over-the-highway trucking services provided by companies solely controlled by your Company were in operation on 11,194.8 miles of roads, compared with 9,639.4 miles of such operations at the end of 1940.

The steamship operations which had been conducted by your Company for many years, between Atlantic ports and the Gulf ports of Houston and Galveston, were discontinued upon completion of delivery in July, 1941, of ten freight steamships to the United States. Service between New Orleans and New York was discontinued in March, 1941, coincident with the sale of the passenger and freight steamship "Dixie" to the United States Navy, as mentioned in last year's report, and in the same month two freight steamships which had been operated in that service were sold to the Pan Atlantic Steamship Corporation.

Separately Operated Solely Controlled Affiliated Companies

The net deficit of the separately operated Solely Controlled Affiliated Companies operating in the United States, shown in the Income Account, excludes interest of $2,499,123.49 accrued by Pacific Electric and Northwestern Pacific on bonds of those companies owned by your Company but not included in its income.

The net deficit of Pacific Electric Railway Company for 1941 was $1,663,835.31, compared with a net deficit of $2,543,120.46 for 1940. The deficits include interest accrued on bonds of the Pacific Electric owned by your Company, such interest amounting to $1,253,658.49 for 1941, and $1,308,317.80 for 1940.

Progress on the program for improvement of the company's operating results included additional substitutions of bus routes for rail passenger service; disposition of certain urban auto bus operations by sale of the franchises; abandonment of 45.72 miles of rail lines; and conversion from double track to single track of 39.54 miles of rail lines used principally for freight operations. The company purchased 46 new modern buses, and modernized 69 rail passenger cars.

A Collateral Trust Indenture was created and $6,000,000, principal amount, of Pacific Electric Railway Company Collateral Trust Bonds dated July 1, 1941, bearing interest at 5%, and maturing on January 1, 1957, were issued with the authority of the Interstate Commerce Commission. The Collateral Trust Bonds are secured by $24,544,000, par value, of Pacific Electric Railway Company Refunding Mortgage Fifty-Year 5% Bonds, due September 1, 1961. The Collateral Trust Bonds were authorized to refinance, in part, $459,000, par value, of First Mortgage 5% Bonds of California Pacific Railway Company, which matured July 1, 1941, and $7,563,000, par value, of Pacific Electric Railway Company First Mortgage 5% Bonds, due January 1, 1942. Holders of these maturing bonds were offered the privilege of surrendering their bonds and receiving in exchange 20 per cent in cash and 80 per cent in Collateral Trust Bonds. Provision has been made for payment of matured bonds owned by holders who did not accept the company's offer, and the mortgages securing the bonds have been satisfied. Southern Pacific Company owns $3,751,200 of the Collateral Trust Bonds, and $2,248,800 of such bonds are held by the public.

During the year, all the $26,000, par value, Los Angeles Pacific Company General Consolidated Mortgage 5% Bonds, due January 2, 1946, were acquired; and in January, 1942, this mortgage was satisfied.

Interurban Electric Railway Company had a net deficit for 1941 of $317,905.47, compared with a net deficit of $661,426.42 for 1940. With discontinuance of service between San Francisco and Albany, Emeryville, and Berkeley on July 26, 1941, Interurban Electric completed abandonment of all of its operations under authority of Federal and State regulatory bodies. Portions

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of the electric rail lines of your Company, used by Interurban Electric under trackage rights, and not required for freight service operations, have been abandoned under authority of the Interstate Commerce Commission.

Northwestern Pacific Railroad Company had a net deficit for 1941 of $1,573,161.17, compared with a deficit of $1,763,338.50 for 1940; the results for both years including $1,245,465 of interest accrued on Northwestern Pacific bonds owned by your Company.

Ferry and electric train interurban service between San Francisco and points in Marin County, California, was discontinued on March 1, 1941, upon establishment of motor coach commutation service by Pacific Greyhound Lines. The resulting decrease in interurban service expenses, and a net increase in total operating revenues, were partly offset by dismissal compensation payments to marine employees affected by discontinuance of ferry service; and increases in operating costs of the company's steam lines, mainly due to a substantial gain in freight traffic volume, and higher wage rates of employees from September 1, 1941, under Mediation Board decision.

The results of Southern Pacific Railroad Company of Mexico are excluded from the consolidated income of Southern Pacific Transportation System and separately operated Solely Controlled Affiliated Companies for 1941, as that company is being required to conduct its operations entirely within its own resources.

The Southern Pacific Railroad Company of Mexico had a net deficit for 1941 of $239,200.30, including a charge of $618,957.73 for amortization of investment in property which is subject eventually to reversion to the Mexican Government. Excluding such charge, operations for 1941 produced a net income of $379,757.43, an improvement of $358,615.70 compared with 1940, mainly due to an increase in revenues brought about by export shipments, particularly perishables, and generally better business conditions throughout Mexico.

Additions and Betterments. Charges to investment in transportation property of Southern Pacific Transportation System aggregated $34,368,489.87. Additions and betterments to rolling stock amounted to $23,315,797.00, an increase of $17,705,237.23; and all other additions and betterments, totaling $11,052,692.87, increased $3,884,692.68; compared with 1940.

The following new rolling stock was received, on orders placed in 1940 and 1941: 20 steam passenger locomotives, 51 lightweight, steel passenger-train cars, and 3,319 freight-train cars, covered by Equipment Trusts; 40 Diesel-electric switchers, and 279 freight-train cars, covered by conditional sale contracts; and 10 freight-train cars provided out of treasury funds. The expenditures include your Company's proportion of the cost of providing equipment for a second jointly owned "City of San Francisco" for the streamliner service between San Francisco and Chicago; and also include the cost of improvements to a number of units of locomotives, passenger-train cars, and freight-train cars, made during the year.

Scheduled for delivery during 1942 on orders placed during 1941 are 10 steam passenger locomotives, 40 heavy-duty freight locomotives, 23 Diesel-electric switchers, and 4,885 freight-train cars. The foregoing equipment is being delivered currently, and it is expected that the final units will be delivered by summer end.

Approximately 490 track miles of the rail laid in renewals, during the year, replaced rail of lighter weight. Approximately 86 miles of new sidings, yard tracks, and extensions of such tracks were completed, and additional such work was in progress at the end of the year. Between Santa Margarita and San Luis Obispo, 16.3 miles, and between Delta and Black Butte, about 50 miles, in California, facilities were being installed to provide for control by train dispatchers of signals and switches governing movement of trains. Shop and roundhouse facilities at various terminals, and locomotive water supply facilities at a number of locations, were improved. A new passenger station was completed at Salinas, California, and the station at Bakersfield, California, was modernized.

Capital Stock. There was no change during the year in the number of shares of capital stock of Southern Pacific Company issued and outstanding. The number of stockholders, at the end of the year, was 41,627, compared with 43,876 at the end of 1940.

Funded Debt and Bank Loans. There was a net decrease, during 1941, of $24,683,463.51 in funded debt held by the public and short term bank loans of Southern Pacific Transportation System.

The $19,800,000 of loans due the Reconstruction Finance Corporation at December 31, 1940, had been reduced to $7,000,000 on July 22, 1941; and the $20,000,000 of short term bank loans carried in the account "Loans and Bills Payable" at December 31, 1940, had been reduced to $13,000,000 on June 16, 1941.

On October 1, 1941, the Company issued $20,000,000 of new Serial Bank Loans maturing over a period of four years in equal quarterly installments of $1,250,000 beginning January 1, 1942, bearing interest at rates ranging from 2% to 3¼% per annum, depending upon maturity, and averaging over the four year term slightly less than 3%. The proceeds of the Serial Bank Loans were used to repay the balance of $7,000,000 of Reconstruction Finance Corporation 4% Loan, due May 1, 1945, and the balance of $13,000,000 of 3½% bank loans which were due November 1, 1941.

On October 31, 1941, a payment of $5,000,000 was made on the

Consolidated Balance Sheet—December 31, 1941

SOUTHERN PACIFIC TRANSPORTATION SYSTEM

(Southern Pacific Company and Transportation System Companies, Consolidated, Excluding Inter-Company Securities and Open Account Balances) *The assets reported below are stated on the basis of the classifications prescribed by the Interstate Commerce Commission. Other than the reserves provided, no attempt has been made to adjust the assets to current estimated values.*

ASSETS

INVESTMENTS		
Transportation property	$1,459,078,011.53	
Miscellaneous physical property	27,107,399.43	
Sinking funds	714,691.14	
Deposits with trustees for the acquisition of equipment trust equipment	9,595,548.05	
Affiliated companies—Securities and advances	272,941,185.93	
Other investments, including securities of, and advances to, non-affiliated companies	5,376,598.13	$1,774,813,434.21
Deduct:		
Reserve for accrued depreciation—Road, equipment, and miscellaneous physical property	$150,218,745.61	
Reserve for amortization of improvements on leased property and investment in property subject to reversion	1,363,261.20	
Appropriated surplus—Reserve for decline in investment securities and advances	137,864,444.12	289,446,450.93
Net investments		$1,485,366,983.28
CURRENT ASSETS		
Cash	$33,922,138.15	
Material and supplies	19,730,695.96	
Other current assets	33,078,578.84	86,731,412.95
DEFERRED ASSETS AND UNADJUSTED DEBITS		
Deferred assets	$1,032,376.19	
Unadjusted debits	13,611,754.96	14,644,131.15
Grand total		$1,586,742,527.38

LIABILITIES

CAPITAL STOCK HELD BY THE PUBLIC		
Southern Pacific Company (3,772,763.0564 shares, no par value)	$383,581,150.64	
Transportation System Companies	1,200.00	$383,582,350.64
GRANTS IN AID OF CONSTRUCTION		4,561,620.99
FUNDED DEBT UNMATURED		
Held by the public	$704,096,025.98	
Held by Solely Controlled Affiliated Companies	4,073,000.00	
Held in sinking funds by Transportation System Companies	700,000.00	708,869,025.98
NON-NEGOTIABLE DEBT TO AFFILIATED COMPANIES		
Open accounts		10,167,472.62
CURRENT LIABILITIES		
Accounts and wages payable	$22,036,104.03	
Interest matured unpaid	2,288,007.03	
Interest payable January 1st	4,254,433.71	
Unmatured interest accrued	5,700,401.48	
Accrued tax liability	7,410,059.36	
Other current liabilities	4,660,224.60	46,349,230.21
DEFERRED LIABILITIES AND UNADJUSTED CREDITS		
Deferred liabilities	$5,037,882.26	
Unadjusted credits	23,812,005.69	28,849,887.95
CONSOLIDATED ADJUSTMENT		
Excess of inter-company liabilities over assets eliminated		69,376,367.46
CORPORATE SURPLUS		
Appropriated surplus	$148,178,376.63	
Less: Reserve for decline in investment securities and advances deducted from "Investments" above	137,864,444.12	
Balance of appropriated surplus	$10,313,932.51	
Profit and loss—Balance	324,672,639.02	334,986,571.53
Grand total		$1,586,742,527.38

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new Serial Bank Loans, reducing the amount outstanding to $15,000,000. Other funded debt held by the public was retired, during the year, in the principal amount of $14,508,463.51, consisting, principally, of bonds and equipment trusts matured, and bonds purchased for use in satisfaction of sinking fund provisions of mortgages or purchased and held alive within the System or by Solely Controlled Affiliated Companies.

In addition to issuance of the new Serial Bank Loans for the purposes mentioned, an equipment trust, known as "Southern Pacific Company Equipment Trust, Series R," was created to provide for the construction and acquisition of certain new rolling stock for delivery in 1941 and 1942, and $14,625,000, par value, of 2¼% Equipment Trust Certificates was issued. The certificates are guaranteed by Southern Pacific Company; are dated June 2, 1941; and mature in amounts of $975,000 on June 1 of each year from 1942 to 1956, both inclusive.

General

During the past year the Transportation System and separately operated Solely Controlled Companies operating in the United States expended $33,588,000 (excluding non-cash items) for additions, including equipment, and for improvements to their several properties. In addition, there was expended $5,000,000 in reduction of bank loans, $19,800,000 in payment of the balance owing on loans from the Reconstruction Finance Corporation, and $18,957,000 for the retirement of other debt, principally bonds, equipment trusts, and conditional sale contract payments that had matured, and for bonds purchased for use in satisfaction of sinking fund provisions of mortgages or purchased and held alive within the System.

Funds for the foregoing purposes were derived principally from earnings, which, after deducting all charges, including approximately $12,000,000 for depreciation and retirements, aggregated $34,574,000; from the sale of capital assets which approximated $12,618,000 (including the "Morgan Line" fleet of steamships); and from $20,135,000 of borrowed funds used in connection with the acquisition of new rolling stock.

In Memoriam

The Board records with profound sorrow, the death, on November 15, 1941, of Mr. A. D. McDonald, who, having entered the Company's service as a clerk in 1901, had, on August 1, 1932, advanced by successive stages to the office of President, and upon retirement of the Chairman and the abolition of that office in 1939, became, as President, the Company's chief executive officer. He also served as a Director and Member of the Executive Committee from 1925 to the time of his death. His election to the office of President came at the beginning of a critical stage in the Company's history, and his leadership, marked by indefatigable energy and excellent judgment, was of inestimable benefit to the Company.

The Board acknowledges, with grateful appreciation, the loyalty and efficient services of officers and employees.

By order of the Board of Directors,

A. T. MERCIER,
President.

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Construction

(*Continued from page 838*)

than $146,000 will be expended for a new west bound train yard, including a yard office building 40 ft. by 80 ft. and facilities for train crews and yard forces. More than 40,000 ft. of tracks and 23 turnouts are included in this project.

At Dunsmuir, Cal., about $196,000 has been authorized for the construction of over 6 miles of additional yard tracks and the rearrangement of other existing yard tracks. The work also involves the shifting of the existing main line for a considerable distance.

At Brooklyn, Ore., about $69,000 has been spent to construct about 1.6 miles of additional yard tracks and a blacksmith and tinsmith shop. This shop, which is of framed timber construction, 80 ft. by 120 ft., covered with galvanized corrugated metal, replaced outmoded smaller buildings used for like purposes.

At Eugene, Ore., improvements to the passenger yard and freight yard, involving an expenditure of $328,000, have just recently been completed. This work included the construction of approximately 12½ miles of additional tracks, construction of a 65,000-gal. water tank and two water columns, replacing a 100-ft. turntable with a 126-ft. turntable, construction of a 4-stall addition to the roundhouse with pits, and necessary air, water, steam lines, store buildings, yard offices, etc.

At Klamath Falls, Ore., work involving the construction of about 4 miles of additional yard tracks has just recently been completed at a cost of approximately $115,000. At Roseville, Cal., about $64,000 will be expended to rearrange existing trackage and to construct additional yard trackage.

Financial

CENTRAL OF GEORGIA.—*R. F. C. Loan.*—This road has applied to the Interstate Commerce Commission for approval of a plan whereby it would borrow $4,840,000 from the Reconstruction Finance Corporation. Proceeds of the loan would be used to pay off $4,840,000 of bonds secured by the Collateral Trust Mortgage of the Central Railway & Banking Company of Georgia, which mature May 1.

CENTRAL OF GEORGIA.—*Annual Report.*—The 1941 annual report of this road shows a net income after interest and other charges, of $1,393,987, compared with a net deficit of $1,895,674 in 1940. Selected items from the income statement follow:

	1941	Increase or Decrease Compared with 1940
Average Mileage Operated	1,855.70	–9.50
RAILWAY OPERATING REVENUES	$22,336,739	+$5,770,542
Maintenance of way and structures	2,367,138	+172,300
Maintenance of equipment	3,730,237	+397,712
Transportation	8,227,529	+1,177,192
TOTAL OPERATING EXPENSES	16,027,243	+1,869,851
Operating ratio	71.75	–13.71
NET REVENUE FROM OPERATIONS	6,309,496	+3,900,691
Railway tax accruals	1,628,110	+186,844
Railway operating income	4,681,386	+3,713,847
Equipment rents—Net Dr.	178,007	+114,251
Joint facility rents—Net Dr.	118,319	–14,331
NET RAILWAY OPERATING INCOME	4,385,060	+3,613,927
Non-operating income	643,602	–254,518
GROSS INCOME	5,028,663	+3,359,409
Rent for leased roads and equipment	290,398	+103,612
Interest on funded debt	2,915,078	–20,802
TOTAL DEDUCTIONS FROM GROSS INCOME	3,634,676	+69,748
Income balance transferred to profit and loss	$1,393,987	+$3,289,661

CHICAGO & EASTERN ILLINOIS.—*Annual Report.*—The 1941 annual report for this company shows net income after fixed charges of $1,472,373, compared with a deficit of $1,041,022 in 1940. Selected items from the income statement follow:

	1941	Increase or Decrease Compared with 1940
Average Mileage Operated	924.92	.....
RAILWAY OPERATING REVENUES	$18,672,227	+$2,984,168
Maintenance of way and structures	2,078,756	+180,622
Maintenance of equipment	3,298,303	+516,912
Transportation (rail line)	6,808,177	+665,060
TOTAL OPERATING EXPENSES	13,712,979	+1,479,970
Operating ratio	73.44	–4.54
NET REVENUE FROM OPERATIONS	4,959,248	+1,504,198
Railway tax accruals*	1,483,000	+495,000
Railway operating income	3,476,248	+1,009,198
Equipment rents—Net Dr.	859,413	+36,312
Joint facility rents—Net Dr.	683,293	+29,053
NET RAILWAY OPERATING INCOME	1,933,542	+943,834
Other income	280,302	–34,876
TOTAL INCOME	2,213,844	+908,958
Rent for leased roads and equipment	196,334	+983
Interest on funded debt	471,208	–1,115,663

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. . . to haul heavier loads on these reduced running schedules.

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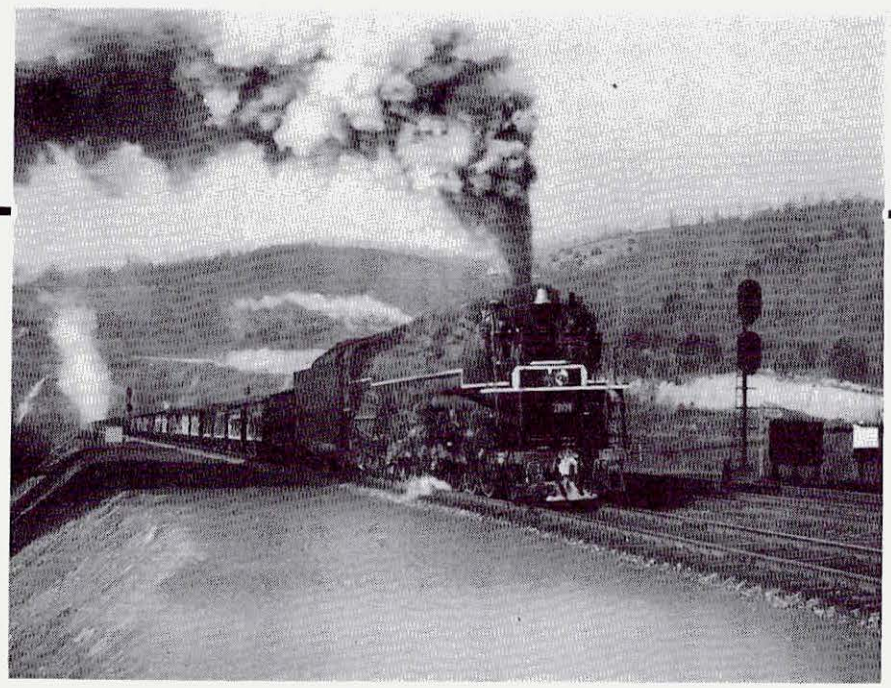
. . . to keep "out-of-service" time to a minimum.



You can get all three of these essential operating factors with high-speed super-power steam locomotives of the type that Lima has recently delivered to the Chesapeake & Ohio. These ten "Allegheny Type" locomotives have proved so successful that the C & O has placed an additional order for ten duplicate locomotives.

LIMA LOCOMOTIVE WORKS LIMA LOCOMOTIVE WORKS INCORPORATED INCORPORATED, LIMA, OHIO

Total Fixed Charges	682,808	−1,576,264
Income After Fixed Charges	1,472,373	+2,513,394
Contingent Charges: Interest on funded debt	721,800	+821,800
Disposition of net income: Appropriation of income for sinking funds	150,000	−27,500
Interest on bonds in sinking fund	8,162	−209,718
Income appropriated for investment in physical property	373,445	+373,445
Balance of income transferred to Profit and Loss	$218,966	+$1,655,367

* Includes $415,000 for Federal Income Taxes.

Chicago & North Western.—*Abandonment.*—Acting on this company's request, Division 4 of the Interstate Commerce Commission, in Finance Docket No. 13519, has dismissed without prejudice its application for authority to abandon a line of railroad extending from Sanborn, Minn., to Wanda.

Chicago, Rock Island & Pacific.—*Court Approves Re-Organization Fees.*—The United States District court at Chicago, on April 15, approved legal, accounting and other fees totaling $1,012,521 involved in re-organization proceedings. The I. C. C. had approved the fees in February.

Chicago, St. Paul, Minneapolis & Omaha.—*Annual Report.*—The 1941 annual report of this company shows net deficit of $705,679 after interest and other charges, a decrease of $1,341,198 as compared with net deficit in 1940. Selected items from the income account follow:

	1941	Increase or Decrease Compared with 1940
Average Mileage Operated	1,629	.....
Railway Operating Revenues	$20,134,522	+$2,055,556
Maintenance of way	2,561,020	+42,464
Maintenance of equipment	3,204,547	+139,197
Transportation	8,564,093	+466,245
Total Operating Expenses	15,624,555	+672,232
Operating ratio	77.6	−5.1
Net Revenue from Operations	4,509,967	+1,383,324
Railway tax accruals	1,443,013	+70,909
Equipment rents—Net	980,177	+2,432
Joint facility rents—Net	383,045	+13,120
Net Railway Operating Income	1,703,732	+1,296,863
Other income	79,128	+11,993
Total Income	1,782,860	+1,308,856
Rent for leased roads	1,703	.....
Interest on funded debt	2,322,845	+2,485
Total Fixed Charges	2,482,521	−.....
Net Deficit	$705,679	−$1,341,198

Erie.—*Reorganization.*—In order to effect its reorganization, this recently-reorganized company has been authorized by Division 4 of the Interstate Commerce Commission to purchase the properties of the Arlington; the Bergen County; the Bergen & Dundee; the Docks Connecting; the Long Dock; the New York, Lake Erie & Western Docks & Improvement; the Newark & Hudson; the Paterson, Newark & New York; the Penhorn Creek; and the Erie Terminals.

At the same time this company was granted authority to assume liability for $2,960,000 of New York, Lake Erie & Western Docks & Improvement first mortgage five per cent bonds, and $7,500,000 of Long Dock consolidated mortgage 3¾ per cent bonds.

Denver & Rio Grande Western.—*Abandonment.*—This company has asked the Interstate Commerce Commission for authority to abandon its Castle Valley branch extending from Salina, Utah, to Crystal, 17.5 miles.

Erie.—*New Director.*—John W. Stedman, vice-president of the Prudential Insurance Company, Newark, N. J., was elected a director, to succeed G. D. Brooke, who has resigned.

Erie.—*Abandonment by the Elmira State Line.*—The Elmira State Line and the Erie, respectively, would be authorized to abandon a line and the operation thereof extending from State Line Junction, N. Y., to the New York-Pennsylvania state line, 6.5 miles, if Division 4 of the Interstate Commerce Commission adopts a recommended report of its Examiner J. S. Prichard. At the same time Examiner Prichard would also permit the Erie to abandon a line of railroad, formerly owned by the Tioga, extending from the New York-Pennsylvania state line to Tioga Junction, Pa., 13.5 miles, and abandon operation under trackage rights over a line of the Northern Central (a P. R. R. subsidiary) from Southport Junction, N. Y., to State Line Junction, two miles.

In the same recommended order the examiner would deny the Erie authority to abandon a line of railroad, formerly owned by the Tioga, extending from Arnot Junction, Pa., to Hoytville, 11.8 miles, and authority to abandon operation over a line of railroad, formerly owned by the Blossburg Coal Company, extending from survey station 1471 plus 04 to Arnot Junction, Pa., 1.5 miles.

Illinois Central.—*Abandonment.*—This company would be authorized to abandon a line extending from the point of connection with the Freeport-Madison Division at Red Oak, Ill., in a general northwesterly direction to Dodgeville, Wis., 57.4 miles, if Division 4 of the Interstate Commerce Commission adopts a proposed report of its Examiner A. G. Nye.

Indiana Harbor Belt.—*Annual Report.*—The 1941 annual report of this road shows a net income, after interest and other charges, of $1,385,819, compared with a net income of $1,116,603 in 1940. Selected items from the income statement follow:

	1941	Increase or Decrease Compared with 1940
Railway Operating Revenues	$14,811,183	+$2,634,365
Maintenance of way and structures	1,068,283	+328,343
Maintenance of equipment	1,326,258	+153,336
Transportation	6,541,068	+1,032,301
Total Operating Expenses	9,688,348	+1,578,127
Operating ratio	65.41	−1.19
Net Revenue from Operations	5,122,835	+1,056,238
Railway tax accruals	1,787,303	+626,315
Railway operating income	3,335,531	+429,922
Equipment rents—Net Dr.	1,145,293	+181,116
Joint facility rents—Net Dr.	304,227	−55,286
Net Railway Operating Income	1,886,011	+304,092
Other income	46,804	+14,939
Total Income	1,932,815	+319,031
Rent for leased roads and equipment	97,138	+57,160
Interest on funded debt	394,000	.....
Total Fixed Charges	505,456	+47,958
Net Income	$1,385,819	+$269,217

Kansas City Southern.—*Annual Report.*—The 1941 annual report for this company shows a net income, after interest and other charges, of $1,846,122, as compared with a net income of $1,132,313 in 1940. Selected items from the income statement follow:

	1941	Increase or Decrease Compared with 1940
Average Mileage Operated	878.78	.....
Railway Operating Revenues	$19,163,035	+$4,780,656
Maintenance of way and structures	2,193,936	+912,100
Maintenance of equipment	3,005,822	+857,659
Transportation	5,448,613	+1,282,795
Total Operating Expenses	12,103,925	+3,132,257
Operating ratio	72.61	+1.39
Net Revenue from Operations	7,059,110	+1,648,399
Railway tax accruals	1,811,442	+540,521
Railway operating income	5,247,668	+1,107,878
Equipment rents—Net Dr.	1,045,326	+432,871
Joint facility rents—Net Dr.	118,796	+11,503
Net Railway Operating Income	4,083,546	+663,504
Other income	686,046	+66,907
Total Income	4,769,593	+730,411
Rent for leased roads	15,019	−481
Interest on funded debt—Fixed interest	2,806,439	+5,305
Total Fixed Charges	2,878,640	+8,249
Net Income	1,846,122	+713,809
Disposition of net income: Dividend appropriations of income—Preferred Stock Dividend No. 110	420,000	+210,000
Income balance transferred to Profit and Loss	$1,426,122	+$503,809

Lehigh Valley.—*Annual Report.*—The 1941 annual report for this company shows a net income, after interest and other charges, of $3,256,470, compared with a net deficit of $301,026 in 1940. Selected items from the income statement follow:

	1941	Increase or Decrease Compared with 1940
Average mileage Operated	1,268.46	6.42
Railway Operating Revenues	$56,750,722	+$9,270,886
Maintenance of way and structures	4,572,857	+1,406,898

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The Franklin System of Steam Distribution makes available 30 to 40% more horsepower for revenue work — without increasing the size of the locomotive. This large increase is accomplished by means of the following features:

1. Separation of valve events, so that admission, cut-off, release and compression are independently controlled.

2. Absolutely fixed valve events at all speeds and all cut-offs.

3. Large inlet and exhaust passages and improved steam flow.

4. Reduced cylinder clearance volume.

5. Reduced weight of moving masses and reduced mechanical friction.

Through the results obtained by the application of The Franklin System of Steam Distribution it is now possible to build smaller locomotives with the same power or the same size locomotives with even greater power.

FRANKLIN RAILWAY SUPPLY COMPANY, INC. NEW YORK CHICAGO

In Canada: FRANKLIN RAILWAY SUPPLY COMPANY, LIMITED, MONTREAL

Maintenance of equipment	8,997,628	+1,227,874
Transportation	22,121,263	+2,600,678
Total Operating Expenses	38,663,395	+5,439,809
Operating ratio	68.13	−1.84
Net Revenues from Operations	18,087,328	+3,831,077
Railway tax accruals	5,090,361	+332,191
Equipment rents—Net	2,736,162	+279,830
Joint facility rents—Net	167,298	+8,811
Net Railway Operating Income	10,093,5066	+3,210,245
Other income	935,477	+154,861
Total Income	11,028,983	+3,365,106
Rent for leased roads	2,651,389	+114,578
Interest on funded debt	4,333,343	+71,385
Total Deductions from Gross Income	7,772,513	−192,389
Net Income	$3,256,470	+$3,557,496

Louisville & Nashville.—*Abandonment.*—This company has asked the Interstate Commerce Commission for authority to abandon a line extending in a southeasterly direction from North Winchester, Ky., to Maloney, 53 miles.

Louisville & Nashville.—*Annual Report.*—The 1941 annual report of this road shows a net income, after interest and other charges, of $19,475,250, compared with a net income of $9,537,146 in 1940. Selected items from the income account follow:

	1941	Increase or Decrease Compared with 1940
Railway Operating Revenues	$119,569,573	+$21,567,946
Maintenance of way and structures	11,719,134	+1,244,931
Maintenance of equipment	23,358,292	−282,736
Transportation	37,247,504	+4,668,659
Total Operating Expenses	78,076,815	+6,019,451
Operating ratio	65.3	−8.2
Net Revenue from Operations	41,492,757	+15,548,495
Railway tax accruals	18,212,127	+7,907,193
Railway operating income	23,280,630	+7,641,303
Equipment rents—Net Cr.	3,229,753	+836,557
Joint facility rents—Net Dr.	962,160	+117,630
Net Railway Operating Income	25,548,223	+8,360,230
Other income	3,091,635	+1,430,180
Income Available for Fixed Charges	28,557,285	+9,816,941
Rent for leased roads and equipment	308,079	−41,118
Interest on funded debt	8,669,094	−151,489
Total Fixed Charges	9,082,035	−121,162
Net income transferred to profit and loss	$19,475,250	+$9,938,104

Maine Central.—*Annual Report.*—The 1941 annual report of this road shows net income of $1,249,082 after interest and other charges, an increase of $809,915 as compared with net income in 1940. Selected items from the income account follow:

	1941	Increase or Decrease Compared with 1940
Railway Operating Revenues	$14,726,458	+$2,569,384
Maintenance of way	1,993,947	+200,538
Maintenance of equipment	2,602,085	+436,290
Transportation	5,017,448	+675,545
Total Operating Expenses	10,281,501	+1,436,441
Operating ratio	69.82	−2.94
Net Revenue from Operations	4,444,957	+1,132,943
Railway tax accruals	1,244,836	+238,213
Railway operating income	3,200,121	+894,730
Equipment and joint facility rents—Net Dr.	497,639	+158,454
Net Railway Operating Income	2,702,482	+736,276
Other income	451,547	−8,986
Total Income	3,154,029	+727,291
Rent for leased roads	573,469	−39,856
Interest on funded debt	1,176,183	−45,290
Total Deductions from Gross Income	1,904,946	−82,624
Net Income	$1,249,082	+$809,915

Minneapolis & St. Louis.—*Sale of Properties.*—The sale of this road has been set for May 15 with Howard S. Abbott as special master. The federal court at Minneapolis, Minn., has fixed $2,010,500 as the minimum bid to be considered.

National Railways of Mexico.—*Annual Report.*—The net income of the National Railways of Mexico amounted to 22,354,632 pesos for 1941, an increase of 6,585,953 pesos, compared with 1940. Selected items from the income account are as follows:

	1941 pesos	1940 pesos
Railway Operating Income	171,190,066	159,344,555
Maintenance of way and structures	22,445,954	22,987,654
Maintenance of equipment	43,765,538	41,102,829
Transportation, express and traffic	68,181,782	66,579,934
Various	9,673,544	9,224,656
Total Operating Expenses	144,066,818	139,895,073
Net Revenue from Operations	27,123,248	19,449,482
Joint facility rents—Credits	242,278	235,897
Railway tax accruals	45,094	122,681
Railway Operating Income	27,320,432	19,562,698
Hire of freight cars	6,034,825	4,730,346
Net Railway Operating Income	21,285,607	14,832,352
Other income	620,503	116,764
Rent for leased roads and equipment—Credit	618,519	849,780
Total income available	22,524,629	15,798,896
Interests	169,997	30,217
Net Income	22,354,632	15,768,679

New York, Chicago & St. Louis.—*Annual Report.*—The 1941 annual report of this road shows a net income, after interest and other charges, of $12,686,691, compared with a net income of $3,610,829 in 1940. Selected items from the income statement follow:

	1941	Increase or Decrease Compared with 1940
Railway Operating Revenues	$60,219,289	+$13,795,887
Maintenance of way and structures	5,269,425	+583,840
Maintenance of equipment	7,790,544	+450,729
Transportation	18,882,948	+2,725,035
Total Operating Expenses	34,961,299	+3,849,880
Operating ratio	58.06	−8.96
Net Revenue from Operations	25,257,990	+9,946,007
Railway tax accruals	3,579,564	+374,996
Railway operating income	21,678,426	+9,571,011
Equipment rents—Net Dr.	3,641,630	+482,668
Joint facility rents—Net Dr.	468,681	+12,633
Net Railway Operating Income	17,568,115	+9,075,710
Other income	404,203	−67,947
Total Income	19,752,768	+8,921,684
Rent for leased roads and equipment	3,532	.....
Interest on funded debt	6,870,870	−159,456
Total Deductions from Gross Income	6,874,401	−159,456
Net Income	12,686,691	+9,075,862
Disposition of net income:		
Income applied to sinking and other reserve funds	98,163	−509
Income balance transferred to profit and loss	$12,588,529	+$9,076,371

New York, New Haven & Hartford.—*New Directors.*—Three new directors have been elected: L. Stanley Champion, of Norwalk, Conn., to represent a committee of common stockholders; Harry W. Harrison, St. Davids, Pa., to represent a committee of preferred stockholders; and Robert E. Smith, New York, as advisor to the two committees.

Northwestern Pacific.—*Abandonment.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon the following portions of its Manor branch: (1) Between Larkspur, Calif., and San Anselmo, 3.1 miles, and (2) between Fairfax, Calif., and the end of the branch at Manor, 0.7 mile.

Peoria & Eastern.—*Annual Report.*—The 1941 annual report of this road shows a net income, after interest and other charges, of $496,106, compared with a net income of $136,791 in 1940. Selected items from the income statement follow:

	1941	Increase or Decrease Compared with 1940
Average Mileage Operated	211.44	.....
Railway Operating Revenues	$3,217,181	+$670,426
Maintenance of way and structures	388,537	+90,697
Maintenance of equipment	554,958	+37,958
Transportation	1,276,160	+213,339
Total Operating Expenses	2,382,666	+339,025
Operating ratio	74.06	−6.18
Net Revenue from Operations	834,515	+331,401
Railway tax accruals	261,301	+75,473
Railway operating income	573,214	+255,928
Equipment rents—Net Dr.	50,754	−105,422
Joint facility rents—Net Dr.	59,625	+1,143
Net Railway Operating Income	462,835	+360,208
Other income	41,736	−640
Gross Income	504,571	+359,567
Miscellaneous rents	8,380	1,107
Total Deductions from Gross Income	8,465	+252
Net Income	$496,106	+$359,315

Peoria & Pekin Union.—*Annual Report.*—The 1941 annual report for this company shows a net income, after inter-

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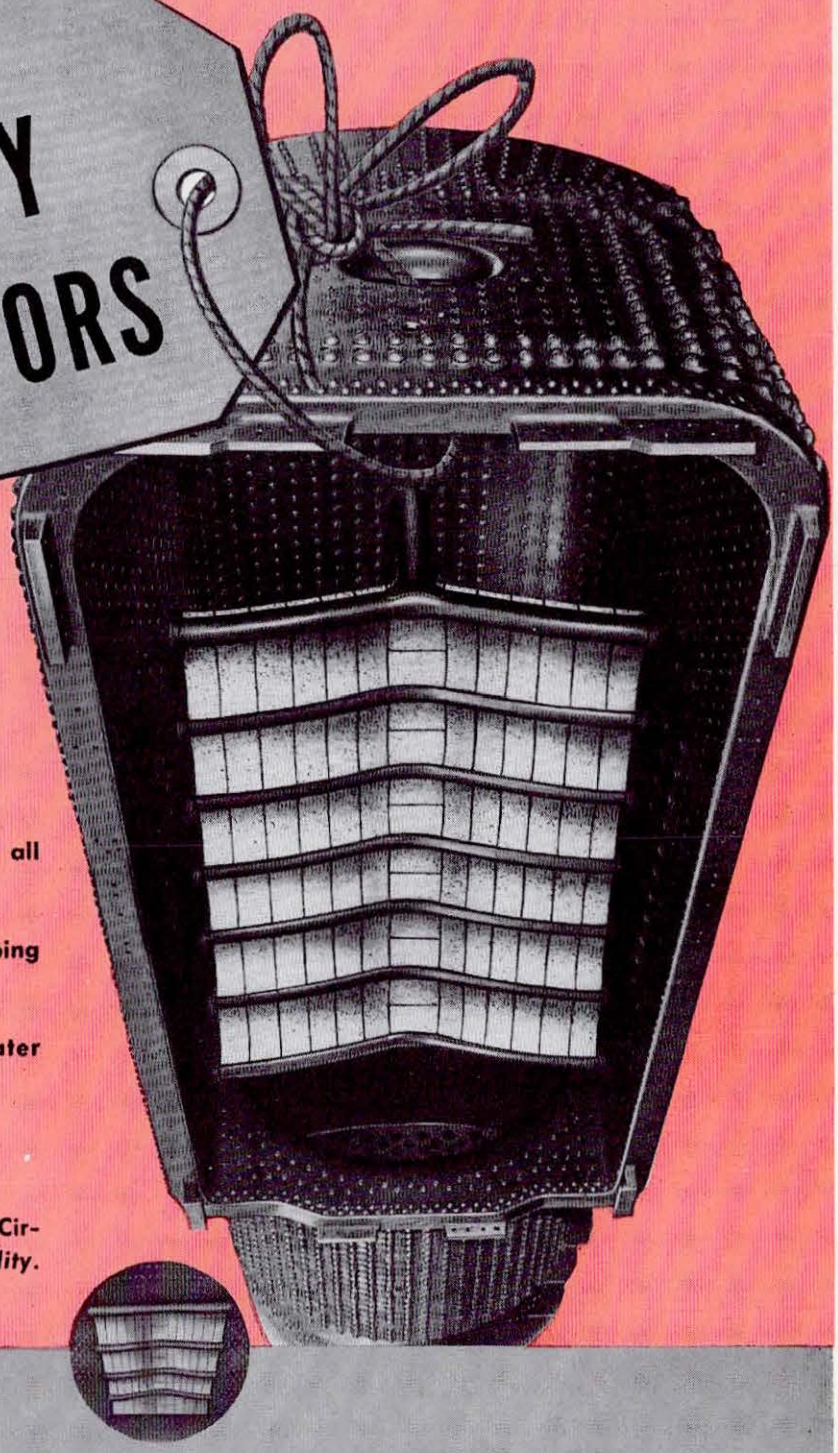

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SECURITY CIRCULATOR DIVISION

est and other charges, of $104,996, compared with a net income of $7,829 in 1940. Selected items from the income statement follow:

	1941	Increase or Decrease Compared with 1940
Railway Operating Revenues	$1,362,595	+$238,030
Maintenance of way and structures	128,305	+13,421
Maintenance of equipment	170,005	+20,077
Transportation	679,621	+94,305
Total Operating Expenses	1,098,258	+129,283
Net Revenue from Operations	264,337	+108,747
Railway tax accruals	166,718	+26,420
Railway operating income	97,619	+82,327
Net rents—Cr.	157,593	+13,152
Net Railway Operating Income	255,212	+95,480
Other income	14,499	−649
Total Income	269,710	+94,831
Rent for leased roads and equipment	750	−500
Interest on funded debt*	159,306	−1,801
Total Fixed Charges	163,188	−2,334
Net Income	104,996	+97,166
Disposition of net income:		
Income balance transferred to profit and loss	$104,996	+$97,166

* Fixed interest.

Pere Marquette.—*Annual Report.*—The 1941 annual report of this road shows a net income, after interest and other charges, of $3,236,907, compared with a net income of $1,253,067 in 1940. Selected items from the income statement follow:

	1941	Increase or Decrease Compared with 1940
Railway Operating Revenues	$39,048,003	+$6,040,988
Maintenance of way and structures	5,053,843	+700,510
Maintenance of equipment	7,468,478	+915,642
Transportation	13,760,897	+1,666,645
Total Operating Expenses	28,362,515	+3,422,692
Operating ratio	72.63	−2.93
Net Revenue from Operations	10,685,488	+2,618,296
Railway tax accruals	3,403,389	+994,691
Railway operating income	7,282,099	+1,623,604
Equipment rents—Net Dr.	580,297	−437,968
Joint facility rents—Net Dr.	586,407	+9,385
Net Railway Operating Income	6,115,395	+2,052,187
Other income	521,091	−18,089
Total Income	6,636,486	+2,034,098
Rent for leased roads and equipment	66,816	+258
Interest on funded debt	3,228,513	+23,851
Total Deductions from Gross Income	3,295,329	+24,109
Net Income	3,236,907	+1,983,840
Disposition of net income:		
Income applied to sinking and other reserve funds	1,250	+100
Income balance transferred to profit and loss	$3,235,657	+1,983,740

Toronto, Hamilton & Buffalo.—*Annual Report.*—The 1941 annual report of this road shows at net income, after interest and other charges, of $476,902, compared with a net income of $369,937 in 1940. Selected items from the income statement follow:

	1941	Increase or Decrease Compared with 1940
Average Mileage Operated	111.03	.....
Railway Operating Revenues	$3,112,083	+$714,572
Maintenance of way and structures	312,432	+21,184
Maintenance of equipment	437,988	+46,376
Transportation	744,895	+116,153
Total Operating Expenses	1,660,321	+196,478
Operating ratio	53.35	−7.71
Net Revenue from Operations	1,451,762	+518,094
Railway tax accruals	819,751	+398,188
Railway operating income	632,011	+119,906
Equipment rents—Net Dr.	51,201	+1,293
Joint facility rents—Net Cr.	63,561	−277
Net Railway Operating Income	644,371	+118,336
Other income	54,724	−110,853
Gross Income	699,095	+7,484
Miscellaneous rents	511	−10
Interest on funded debt	204,240	.....
Total Deductions from Gross Income	222,193	−99,481
Net Income	$476,902	+$106,965

Virginian.—*Annual Report.*—The 1941 annual report of this road shows net income of $6,559,710 after interest and other charges, a decrease of $722,024 as compared with net income in 1940. Selected items from the income account follow:

	1941	Increase or Decrease Compared with 1940
Average Mileage Operated	653.30	+13.01
Railway Operating Revenues	$27,837,329	+$2,191,425
Maintenance of way	2,083,618	−363,198
Maintenance of equipment	5,272,224	+628,611
Transportation	4,290,234	+613,800
Total Operating Expenses	12,435,300	+788,860
Net Revenue from Operations	15,402,029	+1,402,565
Railway tax accruals	7,213,460	+2,223,460
Railway operating income	8,188,569	−820,895
Equipment rents—Net	547,607	−61,993
Joint facility rents—Net	52,720	−3,414
Net Railway Operating Income	8,788,896	−886,302
Other income	103,035	−2,871
Total Income	8,891,931	−889,173
Interest on funded debt	2,265,244	−12,431
Total Fixed Charges	2,327,333	−166,842
Net Income	$6,559,710	−$722,024

Average Prices of Stocks and Bonds

	Apr. 21	Last week	Last year
Average price of 20 representative railway stocks..	24.71	24.47	28.79
Average price of 20 representative railway bonds..	67.04	66.45	59.29

Railway Officers

EXECUTIVE

John W. Martin has been appointed co-receiver for the Florida East Coast, succeeding the late **Edward W. Lane.** The appointment is subject to approval by the Interstate Commerce Commission.

Robert B. Tunstall, general counsel of the Chesapeake & Ohio and the New York, Chicago & St. Louis (Nickel Plate), with headquarters at Cleveland, Ohio, and Richmond, Va., has been elected vice-president and general counsel of the C. & O. Mr. Tunstall was born in New York on February 9, 1880, and graduated in law from the University of Virginia in 1902. From that year until 1927, he engaged in the general practice of law at Norfolk, Va., including service as division counsel for the Southern in Virginia. During the period from 1920-27 he acted as general

Robert B. Tunstall

solicitor in charge of federal valuation of the Virginian. On May 16, 1927, Mr. Tunstall went with the C. & O. as assistant general counsel, and on September 17, 1935, he was promoted to general counsel. On March 14, 1939, he was appointed also general counsel of the Nickel Plate. He has been active in the affairs of civic, educational and professional societies, being past president of the Virginia State Bar Association and a former vice-president of the American Bar Association. Mr. Tunstall is a member of the Law committee and of the Valuation Advisory committee of the Association of American Railroads.

Roy E. Barr, freight traffic manager on the Illinois Central, has been elected vice-president in charge of traffic, with headquarters as before at Chicago, succeeding **Fred H. Law,** whose death on March 31 was reported in the *Railway Age* of April 4. Mr. Barr was born at Mechanicsburg, Ohio, on July 20, 1883, and attended the Metropolitan Business school at Lima, Ohio. On July 4, 1902, he went with the American Express Company at Chicago as a clerk and on October 21, 1902, he en-

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Ample grate and combustion areas and maximum evaporating surface within specified limits

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The Elesco design provides maximum superheating surface and maximum free steam area

WASTE-HEAT RECLAMATION
Elesco Exhaust Steam Injectors provide the highest heat recovery per unit of weight and cost

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tered railway service as a stenographer in the general freight office of the Illinois Central, later serving as traveling freight agent, chief clerk in the coal traffic department and chief clerk in the general

Roy E. Barr

freight office. In 1917 Mr. Barr resigned to join the coal department of the Edward & Bradford Lumber Company as sales manager, serving later as vice-president and subsequently as president of the Great West Coal & Lumber Company. When the Knox Consolidated Coal Company of Indiana was organized, Mr. Barr became its northwestern manager, with headquarters in Chicago, and in July, 1930, he was appointed manager of the Chicago office of the Consolidated Coal Company. In March, 1932, he resigned from the latter position to become general coal agent of the Illinois Central, with headquarters at Chicago and in July of the same year, he was advanced to coal traffic manager. In February, 1936, Mr. Barr was promoted to assistant traffic manager and on May 1, 1939, he was advanced to freight traffic manager, which position he held until his recent promotion.

PURCHASES AND STORES

J. L. Quarles, whose promotion to superintendent of stores of the Chesapeake & Ohio; the New York, Chicago & St. Louis and the Pere Marquette, with headquarters at Cleveland, Ohio, was reported in the *Railway Age* of March 28, was born at Richmond, Va., on August 25, 1893, and entered railway service on December 9, 1909, as a call boy in the mechanical department of the C. & O. at Richmond. On March 1, 1910, he was transferred to the stores department as a store attendant at Richmond and in 1911 he was promoted to assistant storekeeper at Fulton, Va. Mr. Quarles was appointed shipping clerk at Richmond in 1914, and was advanced to assistant storekeeper at that point in 1918. In 1921 he was promoted to storekeeper at Newport News, Va., and two years later he was appointed division storekeeper at Richmond. In 1924 he was advanced to assistant general storekeeper, with headquarters at Clifton Forge, Va., and in 1931 he returned to Richmond as district storekeeper. Mr. Quarles was promoted to general storekeeper, with headquarters at Huntington, W. Va., in 1937, which position he held until his recent promotion, effective March 17.

Joseph C. McCaughan, whose promotion to general storekeeper of the Chesapeake & Ohio at Huntington, W. Va., was reported in the *Railway Age* of March 28, was born on March 24, 1887, at Cumberland, Md. Mr. McCaughan attended Duffs Business College, McKeesport, Pa., and entered railroad service in May, 1906, with the Baltimore & Ohio, subsequently serving as material distributor, clerk, chief clerk and division storekeeper. In September, 1918, he became chief clerk to the Regional Purchasing Committee of the United States Railroad Administration at Philadelphia, Pa., holding that position until termination of federal control of railroads. When the division of Liquidation of Claims of the United States Railroad Administration was organized Mr. McCaughan was appointed chief inspector of the Department of Materials and Supplies. On April 16, 1923, he was appointed general storekeeper of the Hocking Valley and on December 15, 1931, he entered the service of the Chesapeake & Ohio as general foreman,

Joseph C. McCaughan

Huntington (W. Va.) general store. Mr. McCaughan was appointed district storekeeper on June 15, 1937, with headquarters at Richmond, Va., in which capacity he served until his recent promotion.

FINANCIAL, LEGAL AND ACCOUNTING

Medard Kerr, whose promotion to local treasurer of the Southern Pacific Company, with headquarters at San Francisco, Cal., was reported in the *Railway Age* of April 4, was born at Galveston, Tex., on September 24, 1884, and entered railway service in September, 1900, as a clerk in the passenger traffic department of the Gulf, Colorado & Santa Fe at Galveston, Tex. In July, 1903, he went with the Southern Pacific in the accounting department at Houston, Tex., and from June, 1904, until August, 1918, he served in various positions in the accounting department of the Southern Pacific Steamship Lines at New York. In September, 1918, he was promoted to local auditor and in March, 1920, he was advanced to auditor of the Southern Pacific Steamship Lines. In August, 1932, Mr. Kerr was appointed assistant to the executive vice-president of the Southern Pacific Lines in Texas and Louisiana, in charge of steamship opera-

Medard Kerr

tions and with headquarters at Houston, Tex., which position he held until his recent promotion, effective April 1.

Clarence Ogden Amonette, whose promotion to general attorney for the Southern Pacific Company, with headquarters at San Francisco, Cal., was reported in the *Railway Age* of April 11, was born in Amherst county, Va., on January 18, 1889, and graduated in law from the University of Virginia in 1914. He then engaged in the general practice of law at Lynchburg, Va., and served in 1917 and 1918 as local counsel at that point for the Southern and the Chesapeake & Ohio. In July, 1920, he entered railway service as an attorney in the law department of the Southern at Washington, D. C. He left railway service in July, 1923, to engage in general practice as a member of the firm of Ross, Amonette & Ross at Bluefield, W. Va., and on April 15, 1923, he returned

Clarence Ogden Amonette

to railroad service as valuation attorney for the Southern Pacific at San Francisco. On October 1, 1932, Mr. Amonette was appointed attorney, with the same headquarters, which position he held until his recent promotion.

John Thomas McManmon, whose promotion to general freight claim agent of the Great Northern, with headquarters

at St. Paul, Minn., was reported in the *Railway Age* of April 18, was born at St. Paul, Minn., on June 16, 1891, and entered railway service on April 1, 1907, as a clerk in the freight claim office of the Great Northern at St. Paul. On January 1, 1914,

John Thomas McManmon

he was promoted to chief O. S. and D. clerk and on October 1, 1917, he was advanced to assistant chief clerk. Mr. McManmon was promoted to chief clerk on July 29, 1920, which position he held until his recent promotion, effective April 1.

James E. Lyons, whose promotion to general attorney on the Southern Pacific, with headquarters at San Francisco, Cal., was reported in the *Railway Age* of April 11, was born at Benecia, Cal., on April 22, 1890, and attended St. Mary's College, Oakland, Cal.; State Normal School, Lew-

James E. Lyons

iston, Idaho, and the San Francisco Law School, graduating from the latter in 1915. He began his career in 1915 in the private practice of law and entered railway service in 1918 as assistant local counsel for the Southern Pacific at Sacramento, Cal. In 1921 he was promoted to assistant commerce attorney and in 1924 to commerce attorney, with headquarters at San Francisco, which position he held until his recent promotion.

J. A. Nelson, whose retirement on March 31 as chief freight claim agent of the Great Northern, with headquarters at St. Paul, Minn., was reported in the *Railway Age* of April 18, was born in Lund, Sweden, and came to the United States in 1888, first living in River Falls, Wis. He moved to St. Paul in 1891 and, after completing a night school course, became a clerk in the freight claim office of the Great Northern. He received six promotions in 23 years and in 1918 was appointed chief freight claim agent, which position he held until his retirement.

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H. J. Ward

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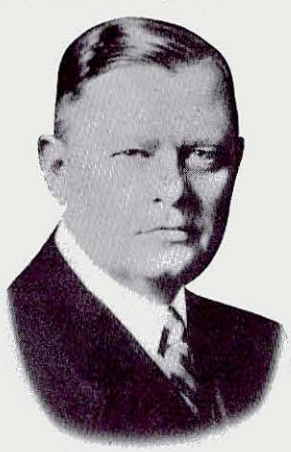

Henley C. Booth

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Rafael Rosas Arce has been appointed payroll auditor of the National Railways of Mexico, a newly created position, with headquarters at Mexico, D. F.

MECHANICAL

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E. H. Holloway, mechanical assistant in the office of the superintendent motive power of the Central of Georgia, at Savannah, Ga., has been appointed supervisor of Diesel maintenance, reporting to T. A. Johnson, master mechanic at Macon, Ga.

Walter Medlock, general foreman on the Denver & Rio Grande Western at Grand Junction, Colo., has been promoted to master mechanic at that point, succeeding **R. B. McLean,** who has been transferred to the Pueblo division, with headquarters at the Burnham shops, Denver, Colo. Mr. McLean relieves **A. E. Rice,** whose promotion to assistant superintendent of the Pueblo division is reported elsewhere in these columns.

G. L. Fisher, master mechanic of the Erie, with headquarters at Buffalo, N. Y., has been transferred to Meadville, Pa., succeeding **T. F. Gorman,** deceased. **C. K. James,** master mechanic of motor equipment at Susquehanna, Pa., has been transferred to Buffalo to succeed Mr. Fisher. The position of master mechanic of motive equipment has been abolished. **P. B. Carrier** has been appointed supervisor of motor equipment at Susquehanna.

OPERATING

Earl Pearce, assistant trainmaster of the Eastern division of the Pennsylvania, has been appointed assistant freight trainmaster of the New York division.

T. B. Smith, night chief dispatcher on the Panhandle & Santa Fe at Amarillo, Tex., has been promoted to trainmaster at Slaton, Tex., succeeding **R. C. Matthews,** who has entered military service.

H. M. Triplett, chief dispatcher on the Smithers division of the Canadian National, has been promoted to acting assistant superintendent of that division, with headquarters at Smithers, B. C.

John J. Dee, superintendent of the Chicago division of the Chicago, North Shore & Milwaukee, has been promoted to general

Continued on second left-hand page

superintendent, a newly created position, with headquarters at Highwood, Ill.

Burton W. Mitchell, whose promotion to superintendent of the San Joaquin division of the Southern Pacific, with headquarters at Bakersfield, Cal., was reported in the *Railway Age* of April 11, was born at Clarendon, Pa., on February 7, 1888, and entered railway service on February 28, 1907, as a brakeman on the Pennsylvania at West Brownsville, Pa. In 1909 Mr. Mitchell went with the Baltimore & Ohio at Uniontown, Pa., as a brakeman and on November 17, 1913, he went with the Southern Pacific at Los Angeles, Cal., as a brakeman. On February 20, 1920, he was promoted to conductor and on May 10, 1921, he was advanced to assistant trainmaster. Mr. Mitchell was appointed general yardmaster at Indio, Cal., on July 10, 1923, and on January 1, 1928, he was promoted to trainmaster at Indio. In 1936 he was transferred to Colton, Cal., and on September 15, 1937, he was promoted to

Burton W. Mitchell

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J. R. Loftis, assistant superintendent of the Salt Lake division of the Denver & Rio Grande Western, with headquarters at Salt Lake City, Utah, has been promoted to acting superintendent of that division, succeeding **B. H. Becker,** who has been called to service as a lieutenant-colonel in the Military Railway Service at Ft. Leonard Wood, Mo. **A. E. Rice,** master mechanic of the Pueblo division, has been promoted to assistant superintendent of that divison, succeeding to the duties of **E. T. Barrett,** trainmaster, who has also been called to service as a major in the Military Railway Service at Ft. Leonard Wood. **W. C. Horner,** trainmaster at Helper, Utah, has been advanced to assistant superintendent at Salt Lake City, relieving Mr. Loftis, and **R. S. James,** trainmaster at Grand Junction, Colo., has been transferred to Helper, replacing Mr. Horner. **L. H. Hale,** trainmaster at Glenwood Springs, Colo., has been transferred to Grand Junction, succeeding Mr. James, and **H. W. Bolton,** assistant trainmaster at Provo, Utah, has been promoted to trainmaster at Glenwood Springs, replacing Mr. Hale.

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TRAFFIC

G. H. O'Brien, traveling freight and passenger agent for the Chicago, Milwaukee, St. Paul & Pacific at Boston, Mass., has been promoted to general agent at Boston, succeeding **T. A. Morgan,** who has been transferred to Philadelphia, Pa., relieving **E. K. Garrison,** who retired from active service on April 20.

J. C. Moore, assistant general freight agent of the Spokane, Portland & Seattle, has been promoted to general freight and passenger agent, with headquarters as before at Potland, Ore., succeeding **R. W. Pickard,** incapacitated. **Edward Britton** has been appointed assistant general freight agent at Portland, succeeding Mr. Moore.

James L. Scales, general agent for the St. Louis-San Francisco at Little Rock, Ark., has been promoted to assistant to the freight traffic manager, a newly created position, with headquarters at St. Louis, Mo., and **Wayne A. Young,** soliciting freight and passenger agent at Kansas City, Mo., has been advanced to general agent at Little Rock, succeeding Mr. Scales. **William L. O'Toole,** assistant general agent at New Orleans, La., has been promoted to general agent at that point, replacing **F. A. Edmondson,** deceased. **George A. Snyder** traffic representative at Washington, D. C., has been advanced to general agent there, relieving **M. G. Dale** of a portion of his duties. Mr. Dale continues as general agent at Philadelphia, Pa.

ENGINEERING & SIGNALING

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John Thomas McManmon

he was promoted to chief O. S. and D. clerk and on October 1, 1917, he was advanced to assistant chief clerk. Mr. McManmon was promoted to chief clerk on July 29, 1920, which position he held until his recent promotion, effective April 1.

James E. Lyons, whose promotion to general attorney on the Southern Pacific, with headquarters at San Francisco, Cal., was reported in the *Railway Age* of April 11, was born at Benecia, Cal., on April 22, 1890, and attended St. Mary's College, Oakland, Cal.; State Normal School, Lew-

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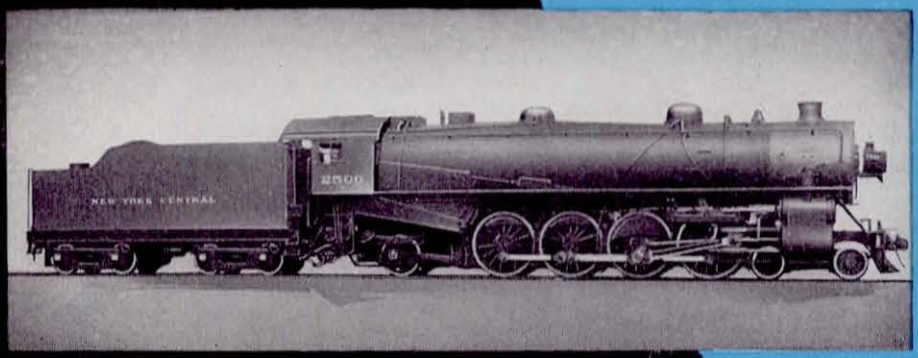
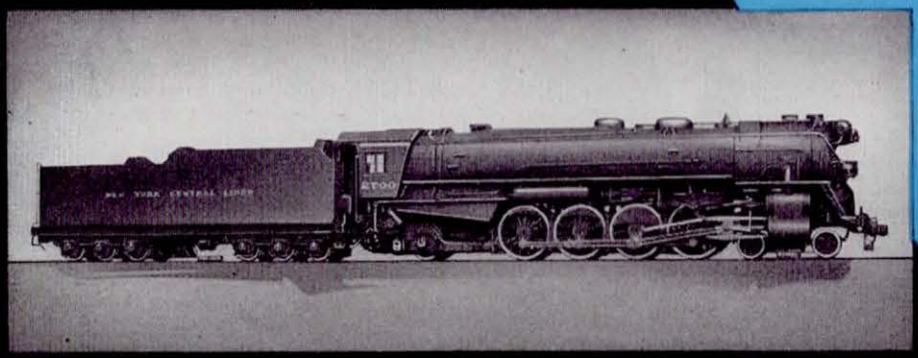
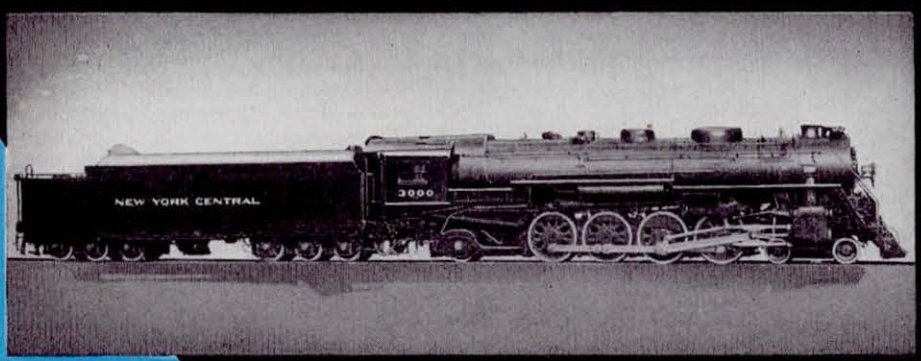
A Demonstration



1916



1925



1940

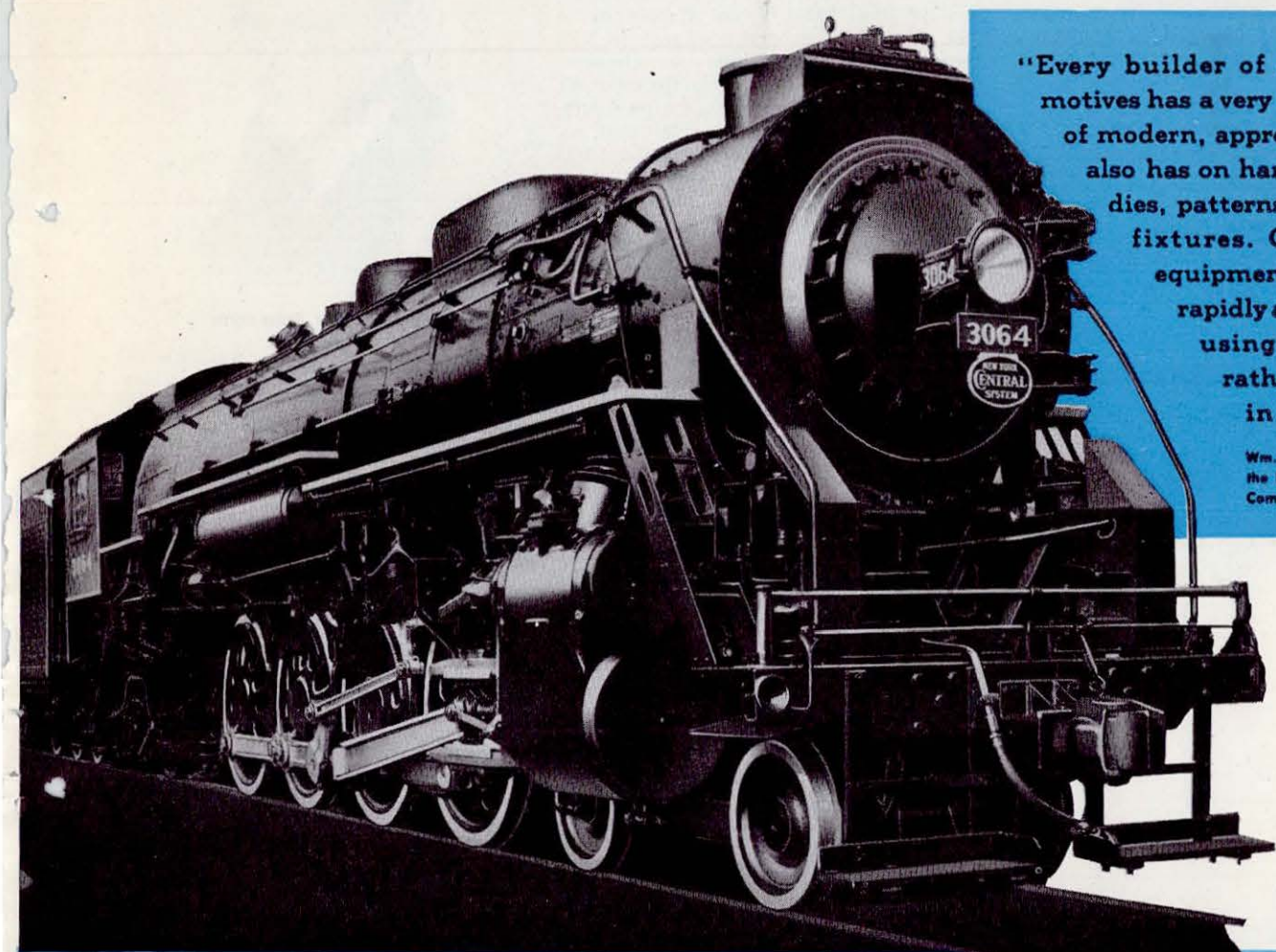
Now

OF PRACTICAL EVOLUTION

NEW YORK CENTRAL 4-8-2's

The first New York Central 4-8-2, No. 2500 was delivered in 1916. Eighty-five locomotives of that series were built during 1916 and 1917. Toward the end of 1924, the New York Central asked American Locomotive for the best model their engineering skill and experience could produce. And in 1925, No. 2700 was delivered. Two hundred and fifty of that series had been delivered by Alco by the end of 1929. Still further improvements were incorporated in No. 3000, thirty-five of which were delivered by Alco in December, 1940.

All of this design and building experience was behind No. 3064, today's model, fifteen of which have just been delivered.



"Every builder of cars and Locomotives has a very complete library of modern, approved designs. He also has on hand the necessary dies, patterns, tools, jigs and fixtures. Orders for new equipment could be filled rapidly and efficiently by using these designs, rather than starting in on new ones."

Wm. C. Dickerman, Chairman of the Board, American Locomotive Company.

AMERICAN LOCOMOTIVE

Manufacturers of Mobile Power

Steam, Diesel and Electric Locomotives, Marine Diesels, Tanks, Gun Carriages and other Ordnance

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Jesse Phillips Dunnagan

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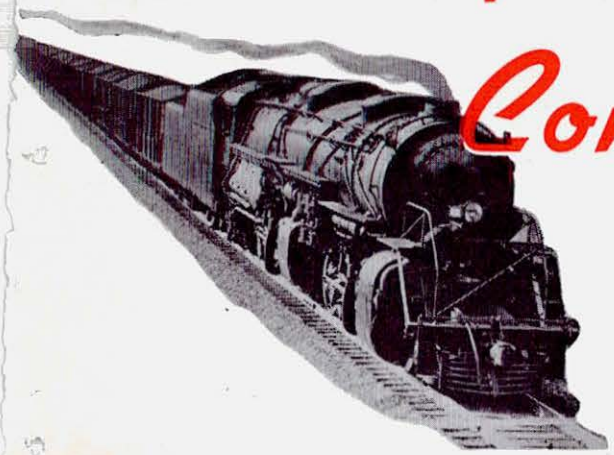
One Way to Help *Maintain* *Consistent* SCHEDULES



Preserve . . . AIR COMPRESSOR *. . . Reliability*

TRAIN delays are costly. To make up lost time often requires operation at uneconomical speeds if schedules are to be maintained . . . You can be doubly sure that no interference with running time is caused by air compressors when they are kept clean and properly lubricated. To this end our Suction Filter and Mechanical Lubricator are very effective . . . Outstanding results have been attained by leading railroads — service life of compressors lengthened three to six times — satisfactory performance throughout the entire period between locomotive shoppings.

For YOU also, these devices will contribute materially to greater locomotive availability and continuity of train service. » » » »

WESTINGHOUSE AIR BRAKE CO.

WILMERDING, PENNA.

W. F. Cummings, whose death was reported in the *Railway Age* of April 18.

Stanley G. Phillips, division engineer of the Terminal division of the B. & M. at Boston, has been promoted to engineer maintenance of way of the Maine Central and the Portland Terminal Company, with headquarters at Portland, to succeed Mr. Sughrue. These appointments became effective on April 15.

Effective April 21, **Harold S. Ashley,** division engineer of the Portland division of the B. & M., was transferred to the Terminal division at Boston, to succeed Mr. Phillips, and **Harold F. Tupper,** acting engineer of track, with headquarters at Boston, has been appointed division engineer of the Portland division, with headquarters at Dover, N. H., to succeed Mr. Ashley. **Guy H. Watson,** engineer of track, with headquarters at Boston, who has been on leave of absence, has returned to active service.

Mr. Sughrue was born in Nashua, N. H., on February 22, 1889, and entered railroad service in June, 1906, as a section man on the Boston & Maine during summer vacation after graduating from Nashua high school. He attended the University of New

Timothy G. Sughrue

Hampshire and during summer vacations in 1906 and 1907 worked as a yard clerk and sectionman with the Boston & Maine. In 1909, after graduation, he was appointed chainman becoming rodman in 1910, draftsman in 1911, assistant supervisor of bridges and buildings in 1914 and supervisor of bridges and buildings in 1918. Mr. Sughrue was appointed division engineer of the Terminal division of the Boston & Maine in 1927 and in 1939 he was appointed engineer of maintenance of way of the Maine Central and Portland Terminal, which positions he held until his recent promotion. He is a member of the New England Railroad Club and the American Railway Engineering Association.

L. P. Struble, assistant to the chief engineer of the Central region of the Pennsylvania at Pittsburgh, Pa., has been promoted to chief engineer of the Eastern region, with headquarters at Philadelphia, Pa., to succeed **William B. Wood,** who has been appointed resident engineer at Baltimore, Md. Mr. Struble was graduated from Lehigh University and entered the service of the Pennsylvania on November 22, 1909, as a draftsman in the office of the chief engineer maintenance of way at Pittsburgh. Mr. Struble was engineer in charge of the construction of the pres-

L. P. Struble

ent facilities and elevated track lay-out at Newark, N. J. Following the completion of this improvement, he was appointed assistant to chief engineer of the Central region at Pittsburgh in June, 1938, which position he held until his recent promotion.

Mr. Wood was born on September 11, 1876, at Harrisburg, Pa., and received his Ph.B. from the Sheffield Scientific School of Yale University in 1897. He entered railroad service on October 6, 1897, as rodman on the Pittsburgh, Cincinnati, Chicago & St. Louis (now P. R. R.) and his entire service has been with the Pennsylvania or companies which are now part of the Pennsylvania system. Mr. Wood served successively as levelman, transitman, assistant engineer, engineer maintenance of way, and division superintendent. On April 1, 1914, he was appointed general manager of the Grand Rapids & Indiana (now P. R. R.) and on March 1, 1920, he became general superintendent of the Illinois division of

William B. Wood

the Pennsylvania, becoming acting general manager of the Northwestern region in February, 1923. Mr. Wood then served as general superintendent of the Illinois and New Jersey divisions, successively. In July, 1926, he became assistant to general manager of the Western region and in December, 1929, he was appointed engineer, Baltimore improvement, becoming acting chief engineer of the Central region in October, 1935. In November, 1936, Mr. Wood was appointed chief engineer of the Central region, being transferred to the Eastern region in February, 1939.

SPECIAL

W. A. Gammon, assistant general manager of the Eastern lines of the Santa Fe Transportation Company (motor transport subsidiary of the Atchison, Topeka & Santa Fe) at Wichita, Kan., has been promoted to general manager, Western lines, with headquarters at Los Angeles, Cal., succeeding **Gene Allen,** who has been transferred to the Eastern lines, with headquarters at Wichita, replacing **Harry G. Brandt,** whose appointment as associate director of the Office of Defense Transportation, Division of Railway Transport, with headquarters at Chicago, was reported in the *Railway Age* of April 4.

F. W. Edge, superintendent of personnel of the Canadian National, has been

F. W. Edge

appointed director of labor relations, with headquarters at Montreal, Que. Mr. Edge was born in Manchester, England, and went to Canada in 1911. Soon afterwards he entered the service of the Grand Trunk (Canadian National) as a locomotive fireman at Coteau Junction, Que. The following year he was transferred to Ottawa, Ont., where he held clerical positions in the motive power department until 1915, when he went overseas with the Canadian Expeditionary Force. In 1919 Mr. Edge returned to the Grand Trunk as chief clerk in the motive power department at Ottawa, later transferring to Montreal. In 1920 he became traveling accountant, with headquarters at Montreal. After the amalgamation of the Grand Trunk into the Canadian National system, he was transferred to Toronto, Ont., subsequently holding various positions until 1928, when he became inspector, Wage Bureau. Mr. Edge became investigator in the personnel sec-

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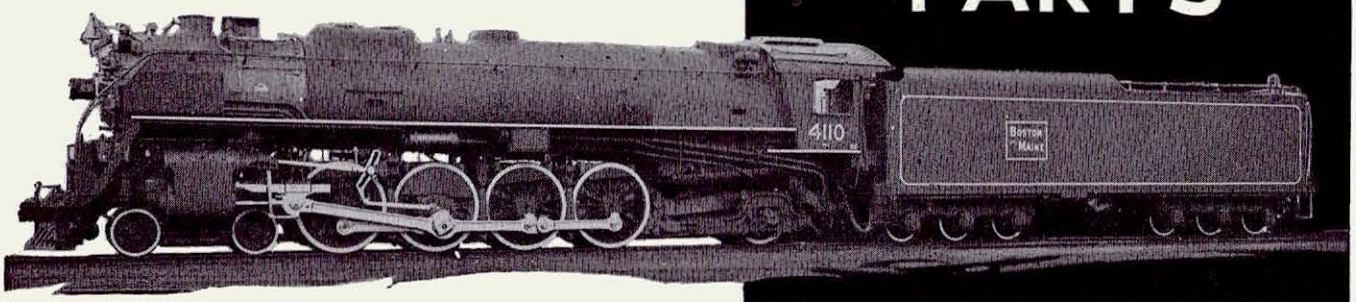
Keep 'Em Rolling

HSGI
Wear Resisting PARTS



TRANSPORTATION is a vital link in the National defense program—every locomotive must do its share—wear-resisting parts made from HUNT-SPILLER *Air Furnace* GUN IRON will play a big part in keeping your power out on the road in revenue service.

The resistance of H S G I parts to frictional resistance and high superheat temperatures not only insures maximum availability of power but also economies in fuel consumption and maintenance. *Keep 'em rolling.*

H S G I
Reg. U. S. Trade Mark

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Pistons or Piston Bull Rings
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for Diesel Service

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tion of the Wage Bureau in 1930 and in 1937 he was promoted to inspector of staffs in the personnel department, becoming superintendent of personnel the following year.

OBITUARY

Dr. Thomas R. Crowder, director of the department of sanitation and surgery of the Pullman Company, with headquarters at Chicago, died of a heart attack at his home in Winnetka, Ill., on April 15. Dr. Crowder was born at Sullivan, Ind., on February 6, 1872, and graduated from De Pauw University in 1898. He completed his medical education at the Rush Medical colleged in 1897 and studied at the University of Vienna in 1902 and 1903. He then became assistant to the late Dr. Frank Billings of Chicago and in March, 1905, he went with the Pullman Company as superintendent of sanitation. In 1915 he

Dr. Thomas R. Crowder

was promoted to director of the department of sanitation and surgery. Dr. Crowder was responsible among other things for the early development of the exhaust ventilation of cars and the inauguration of an annual physical survey of porters in 1921, and later of pre-employment examination of many groups of employees. During World War I he aided in the planning of hospital trains and he saw much service in the evacuation of sick and wounded from overseas. While on the committee of health and medical relief of the U. S. Railway Administration he drew a sanitary code that was adopted by nearly all the states. Dr. Crowder had been president of the Railway Chief Surgeons Association and the American Association of Industrial Physicians and Surgeons; chairman of the public health section of the American Public Health Association, and an honorary member of the Conference of State and Provincial Health Authorities of North America.

Operating Revenues and Operating Expenses of Class I Steam Railways

Compiled from 133 Monthly Reports of Revenues and Expenses Representing 136 Class I Steam Railways

(Switching and Terminal Companies Not Included)

FOR THE MONTH OF FEBRUARY, 1942 AND 1941

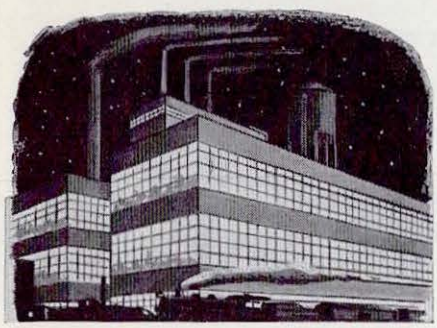
Item	United States		Eastern District		Southern District		Western District	
	1942	1941	1942	1941	1942	1941	1942	1941
Miles of road operated at close of month	231,593	232,413	56,920	57,267	43,900	44,217	130,773	130,929
Revenues:								
Freight	$377,593,235	$296,145,630	$157,515,263	$131,439,343	$73,997,810	$61,860,538	$146,080,162	$102,845,749
Passenger	54,745,877	36,511,235	26,549,678	18,516,513	10,849,005	7,160,496	17,347,194	10,834,226
Mail	8,180,270	7,944,520	2,983,896	2,951,205	1,434,481	1,394,563	3,761,893	3,598,752
Express	4,811,366	3,571,388	1,704,893	1,378,442	878,513	799,279	2,227,960	1,393,667
All other operating revenues	17,155,267	14,240,726	8,336,166	7,213,691	2,329,731	1,954,306	6,489,370	5,072,729
Railway operating revenues	462,486,015	358,413,499	197,089,896	161,499,194	89,489,540	73,169,182	175,906,579	123,745,123
Expenses:								
Maintenance of way and structures	47,550,491	36,145,377	19,483,521	15,215,779	9,859,876	7,338,711	18,207,094	13,590,887
Maintenance of equipment	89,961,770	71,265,850	41,753,814	33,308,829	16,783,694	13,390,235	31,424,262	24,566,786
Traffic	9,353,669	8,810,502	3,377,215	3,130,289	1,942,113	1,790,836	4,034,341	3,889,377
Transportation—Rail line	163,950,690	125,075,115	76,130,636	58,321,338	27,740,942	21,949,027	60,079,112	44,804,750
Transportation—Water line	17,212	597,968	.....	.....	.....	.....	17,212	597,968
Miscellaneous operations	4,617,403	3,312,680	1,934,506	1,412,610	797,991	605,728	1,884,906	1,294,342
General	12,202,144	10,585,439	4,939,666	4,209,991	2,296,607	2,069,560	4,965,871	4,305,888
Transportation for investment—Cr.†	.....	202,735	.....	34,432	.....	52,831	.....	115,472
Railway operating expenses	327,653,379	255,590,196	147,619,358	115,564,404	59,421,223	47,091,266	120,612,798	92,934,526
Net revenue from railway operations	134,832,636	102,823,303	49,470,538	45,934,790	30,068,317	26,077,916	55,293,781	30,810,597
Railway tax accruals	56,736,208	34,668,724	21,799,607	14,909,401	13,795,410	8,428,581	21,141,191	11,330,742
Railway operating income	78,096,428	68,154,579	27,670,931	31,025,389	16,272,907	17,649,335	34,152,590	19,479,855
Equipment rents—Dr. balance	8,819,164	7,397,810	4,473,250	3,637,149	315,676	449,530	4,030,238	3,311,131
Joint facility rent—Dr. balance	2,791,243	2,620,812	1,423,857	1,340,977	302,511	274,729	1,064,875	1,005,106
Net railway operating income	66,486,021	58,135,957	21,773,824	26,047,263	15,654,720	16,925,076	29,057,477	15,163,618
Ratio of expenses to revenues (per cent)	70.8	71.3	74.9	71.6	66.4	64.4	68.6	75.1
Depreciation included in operating expenses	18,837,533	17,662,473	8,161,421	7,701,309	4,147,502	3,590,944	6,528,610	6,370,220
Amortization of defense projects	4,041,608	.....	1,771,936	.....	1,001,638	.....	1,268,034	.....
Pay roll taxes	12,427,373	9,500,974	5,537,717	4,244,121	2,208,050	1,710,484	4,681,606	3,546,369
All other taxes	44,308,835	25,167,750	16,261,890	10,665,280	11,587,360	6,718,097	16,459,585	7,784,373

FOR TWO MONTHS ENDED WITH FEBRUARY, 1942 AND 1941

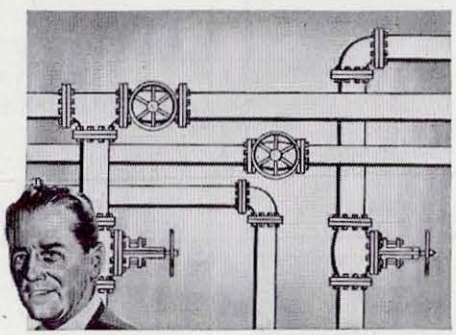
Miles of road operated at a close of month*	231,617	232,427	56,929	57,265	43,902	44,229	130,786	130,933
Revenues:								
Freight	$770,164,059	$605,726,083	$321,450,172	$267,301,603	$152,355,204	$127,031,005	$296,358,683	$211,393,475
Passenger	110,443,143	76,669,850	54,024,747	39,334,318	20,904,768	14,466,023	35,513,628	22,869,509
Mail	17,086,395	16,335,028	6,202,745	6,116,502	3,015,896	2,865,087	7,867,754	7,353,439
Express	9,502,391	6,977,227	3,205,841	2,592,276	1,692,082	1,567,759	4,604,458	2,817,192
All other operating revenues	35,981,193	30,079,501	17,487,667	15,222,398	4,883,004	4,088,002	13,610,522	10,769,101
Railway operating revenues	943,177,171	735,787,689	402,371,172	330,567,097	182,850,954	150,017,876	357,955,045	255,202,716
Expenses:								
Maintenance of way and structures	97,043,132	72,882,820	39,954,160	30,656,379	19,638,376	14,978,125	37,450,596	27,248,316
Maintenance of equipment	184,400,905	145,483,569	85,550,456	68,209,587	34,554,134	27,440,909	64,296,315	49,833,073
Traffic	19,065,629	17,685,759	6,821,561	6,281,504	3,965,759	3,622,577	8,278,309	7,781,678
Transportation—Rail line	340,936,098	259,045,192	156,933,336	120,043,844	57,846,315	45,441,822	126,156,447	93,559,526
Transportation—Water line	32,310	1,164,263	.....	.....	.....	.....	32,310	1,164,263
Miscellaneous operations	9,828,918	6,964,888	4,143,909	3,013,357	1,660,693	1,241,339	4,024,316	2,710,192
General	25,127,323	21,715,297	10,050,946	8,645,179	4,837,593	4,253,372	10,238,784	8,816,746
Transportation for investment—Cr.†	.....	382,710	.....	56,681	.....	92,421	.....	233,608
Railway operating expenses	676,434,315	524,559,078	303,454,368	236,793,169	122,502,870	96,885,723	250,477,077	190,880,186
Net revenue from railway operations	266,742,856	211,228,611	98,916,804	93,773,928	60,348,084	53,132,153	107,477,968	64,322,530
Railway tax accruals	107,901,279	70,524,898	42,314,142	30,167,554	27,291,657	17,309,804	38,295,480	23,047,540
Railway operating income	158,841,577	140,703,713	56,602,662	63,606,374	33,056,427	35,822,349	69,182,488	41,274,990
Equipment rents—Dr. balance	17,470,536	15,196,696	8,859,551	7,176,696	190,548	886,337	8,420,437	7,133,663
Joint facility rent—Dr. balance	5,920,778	5,350,759	3,008,723	2,872,251	640,992	582,280	2,271,063	1,896,228
Net railway operating income	135,450,263	120,156,258	44,734,388	53,557,427	32,224,887	34,353,732	58,490,988	32,245,099
Ratio of expenses to revenues (per cent)	71.7	71.3	75.4	71.6	67.0	64.6	70.0	74.8
Depreciation included in operating expenses	36,590,189	35,343,427	16,420,826	15,463,895	7,738,874	7,156,972	12,430,489	12,722,560
Amortization of defense projects	7,903,306	.....	3,108,322	.....	1,874,226	.....	2,920,758	.....
Pay roll taxes	25,751,430	19,551,612	11,396,016	8,728,620	4,556,727	3,527,601	9,798,687	7,295,391
All other taxes	82,149,849	50,973,286	30,918,126	21,438,934	22,734,930	13,782,203	28,496,793	15,752,149

* Represents an average of the mileage reported at the close of each month within the period.
† General Account VIII. Transportation for Investment—Cr. cancelled effective January 1, 1942.
Compiled by the Bureau of Statistics, Interstate Commerce Commission. Subject to revision.

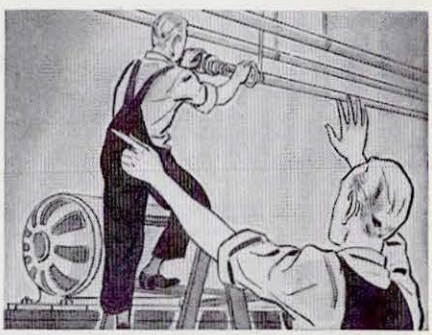
These "Pointers" Made a Tough Training Job Easier!



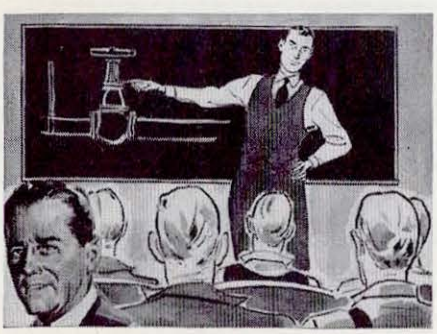
❶ With the plant running 168 hours a week, we needed more and better maintenance—day and night. On piping, for example, you can't get away with part-time maintenance and keep production lines running smoothly. It's too important!



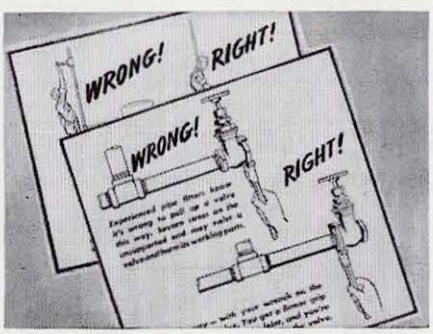
❷ Soon enough, we found valves and fittings would have to be handled with unusual care to get every last bit of service out of them. They're vital equipment, and with all the demands of war, deliveries of replacements were being slowed up.



❸ Sure, we put on more "maintenance" men, but many had never handled a wrench before. We had to start from scratch in training them. In the past, our veteran crews had the time to teach apprentices, but that was "before Pearl Harbor."



❹ You know that piping maintenance is a specialized job. But it's knowing the "kinks" of the trade that makes the difference between good and bad installations. They help speed-up the work as well as step-up efficiency of pipe lines.



❺ We had to teach these men the "rights and wrongs" of piping make-up. We had to be sure they knew enough about valves of all types, and when and where to use them. Good piping depends a lot on using the right equipment.

HOW TO KEEP YOUR PLANT GOING WITHOUT INTERRUPTION!
11 SIMPLE WAYS TO GET BETTER SERVICE FROM PIPING EQUIPMENT
HELPFUL HINTS ON CHOOSING VALVES FOR BETTER PIPING SERVICE
TIPS ON VALVE TRIM
TO HELP KEEP PIPING ON THE JOB

❻ These Crane Shop Bulletins made a tough training job easier. They're full of valuable piping pointers. We used them in employee training classes; posted them in maintenance shops; passed them among the men. Even the old-timers use them! **And listen, any plant can get these Bulletins free—through the local Crane Representative.**

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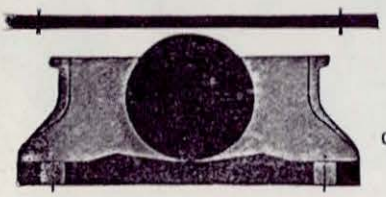

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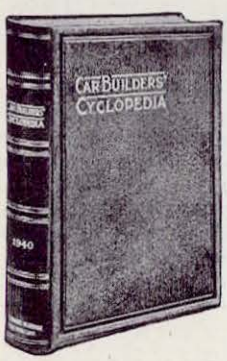

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FOR INDEX
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"	#13.24—1—43' deck girder span; 1—66' deck truss span	100,324 "
"	#13.50—1—26' deck plate girder span	12,019 "
"	#16.64—1—40' thru girder span	20,487 "
"	#18.33—2 span deck plate girder, each span 22'	10,000 "
"	#23.92—1 span 45' deck plate girder	30,600 "
"	#32.92—1 span 36' deck plate girder	16,450 "
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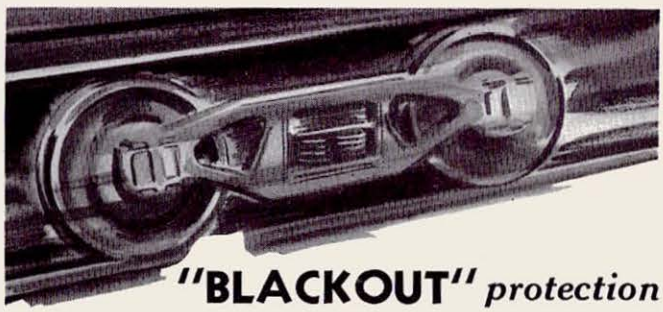

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Index to Advertisers

April 25, 1942

A

Air Reduction Sales Co. 11
American Arch Company, Inc., Security Circulator Division 29
American Car and Foundry Co. 12, 13
American Hammered Piston Ring Division of Koppers Co... 19
American Locomotive Company 30a, 30b
American Optical Company, The 14
American Steel Foundries 9

B

Baldwin Locomotive Works, The 21
Bartlett Hayward Division of Koppers Co. 19
Bendix-Westinghouse Automotive Air Brake Co. 8
Bethlehem Steel Company 3

C

Carey Manufacturing Company, The Philip 35
Carnegie-Illinois Steel Corporation 6, 7
Classified Advertisements 34
Climax Molybdenum Company 2
Columbia Steel Company 6, 7
Crane Co. 33

D

Dearborn Chemical Company 5
Dulien Steel Products, Inc. 35

E

Electro-Motive Division, General Motors Corporation..Front Cover
Evans Products Company 4

F

Franklin Railway Supply Co., Inc. 28

G

General Railway Signal Co. .....Back Cover
Get Together Department 34
Gold Car Heating & Lighting Co. 34
Grant Photo Corporation 34
Grip Nut Company 16, 17

H

Hotel Cleveland 35
Hunt Company, Robert W. 34
Hunt-Spiller Mfg. Corporation 32
Hyatt Bearings Division, General Motors Corporation 22

I

Iron & Steel Products, Inc. 34

K

Kerite Insulated Wire & Cable Co., Inc., The 35
Koppers Coal Company, The 19
Koppers Company 19

L

Lima Locomotive Works, Inc. 27

N

National Bearing Metals Corporation 20
National Malleable and Steel Castings Co. 26

O

Ohio Locomotive Crane Co., The 34

P

Pittsburgh Spring & Steel Co. 34

R

Rail & Industrial Equipment Co. 34
Railway Educational Bureau, The 34
Railway Steel Spring Division of the American Locomotive Co. 10

S

Schaefer Equipment Company 18
Simmons-Boardman Publishing Corp. 21a, 21b, 34
Standard Car Truck Company 15
Stucki Co., A. 34
Superheater Co., The 30
Symington-Gould Corporation, The 41

T

Tar and Chemical Division of Koppers Co. 19

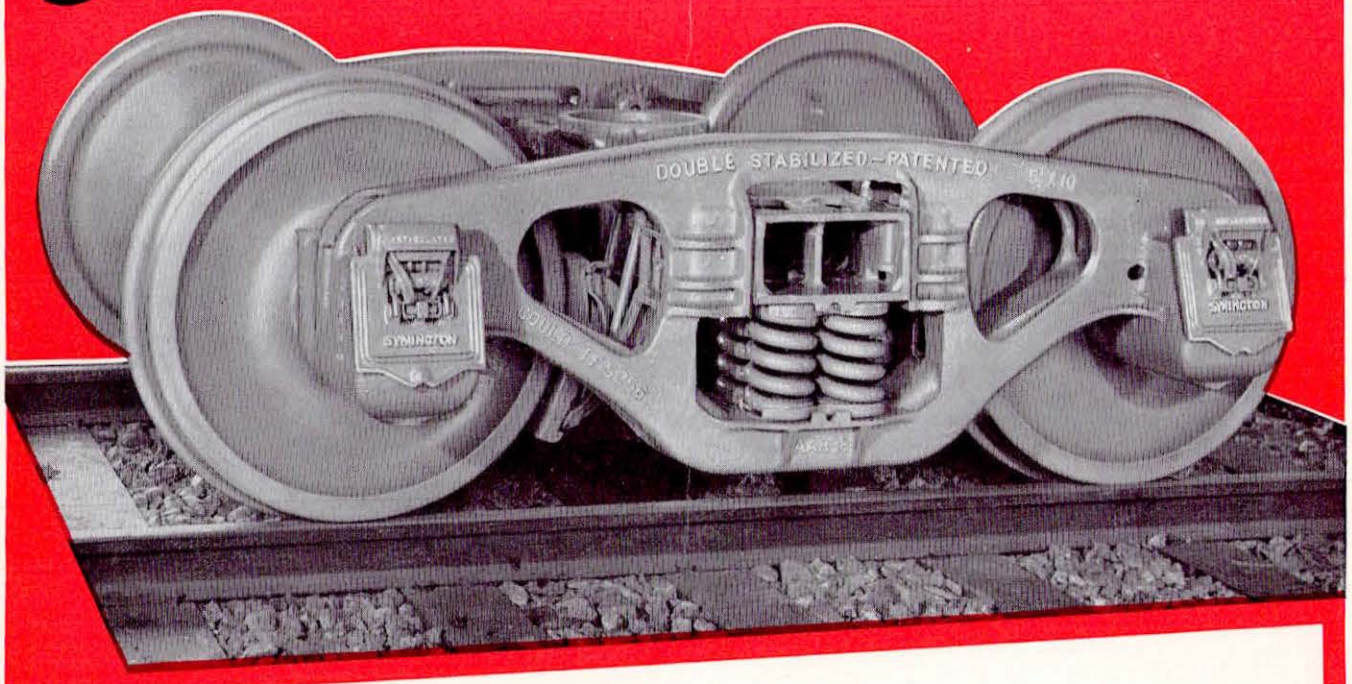
U

Union Switch & Signal Company 24
United States Steel Corporation 6, 7
United States Steel Export Co. 6, 7

W

Westinghouse Air Brake Co. 31
White Tar Company of New Jersey, Inc., The 19
Wood Preserving Corporation, The 19

THE SYMINGTON "DOUBLE STABILIZED" TRUCK



PRINCIPLE: Constant frictional resistance on both compression and release.

PERMITS: Minimum of frictional resistance consistent with proper control of truck spring harmonic action.

PROVIDES: Soft spring action and easy riding with light or full loads.

PREVENTS: Damage to lading, car body and track.

Protect Your Lading and Equipment with Symington Devices

THE SYMINGTON-GOULD CORPORATION

Works: ROCHESTER & DEPEW, NEW YORK

New York Chicago St. Louis Baltimore Boston San Francisco

In Canada: ADANAC SUPPLIES, LTD., Montreal, Que.

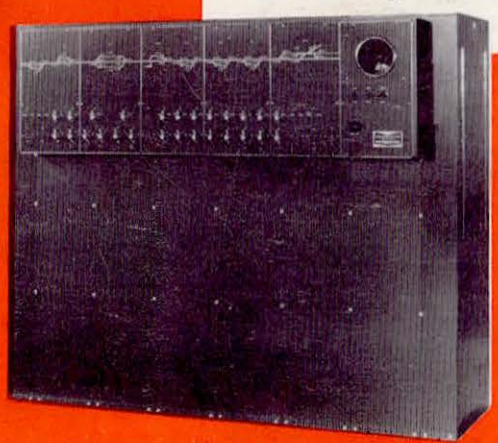
CTC BREAKS UP BUNCHING OF TRAINS

FREIGHTS COVER THE GROUND IN HALF THE TIME

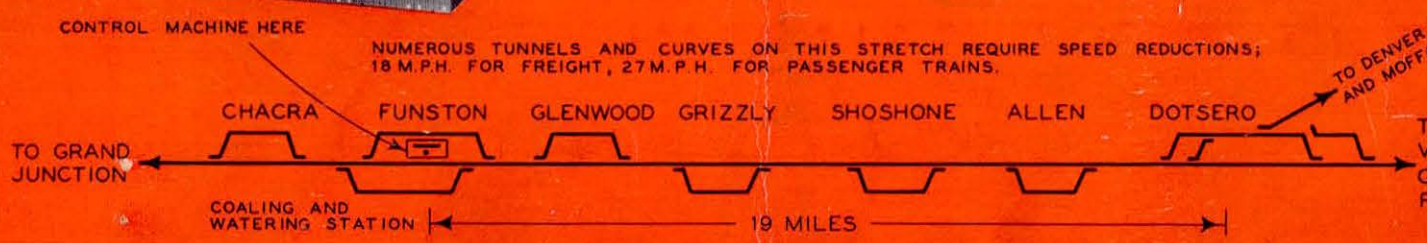
Traffic from two busy routes on the Denver and Rio Grande Western converges into a 26.5-mile section of single track. Because of the congestion it ordinarily took a freight train 1½ to 2 hours to cover 19 miles from the junction point to a coaling station.

G-R-S Centralized Traffic Control was installed in 1941. Because trains could be directed by wayside signals to advance through an unoccupied block at a moment's notice, and because high speed turnouts were electrically set for them, it was found that freights covered the same 19 miles in 42 minutes. With CTC they were saving 48 to 78 minutes each trip.

Are your freights and passengers bunching up? G-R-S CTC can help you as it has helped on 50 installations on 18 roads already. **Ask our nearest District Office for a study and estimate.**



CTC breaks up the bunching of trains by enabling an operator to control the traffic (assisted by the latest operating information displayed on a control panel directly before him). His directions are given to enginemen by signals in the field. Transmission of directions is a matter of seconds.



GENERAL RAILWAY SIGNAL COMPANY
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